UNITED STATES DEPARTMENT OF AGRICULTURE
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Statements prepared by Agencies and Bureaus of the United States Department of Agriculture and the War Food Administration, for presentation to the Special Committee of the House Committee on Agriculture on Post-War Farm Programs, at hearings relating to cotton, held on December 4, 1944.

Agency statements are attached in the following order:

- Agricultural Research Administration
- Office of Distribution, Cotton and Fiber Branch
- Soil Conservation Service
- Farm Credit Administration
- Commodity Credit Corporation
  - Cotton
  - Fats and Oils
- Extension Service
- Foreign Agricultural Relations
  - Post-War Foreign Markets for American Cotton
  - Foreign Cotton Production
- Solicitor's Office

UNITED STATES DEPARTMENT OF AGRICULTURE
War Food Administration

(Material for presentation to the Special Committee of the House Committee on Agriculture on Post-War Farm Programs - Hearings on December 4, 1944)

COTTON RESEARCH AND RELATED WORK OF THE AGRICULTURAL RESEARCH ADMINISTRATION

By P. V. Cardon, Assistant Research Administrator

The cotton research of the Agricultural Research Administration, together with its related activities in the control of insect pests, is designed to benefit both producers and consumers of cotton and cotton products by (1) increasing the efficiency of production and improving the quality of the cotton produced, and (2) finding new uses for cotton and improving the quality of the products already in use. The work includes both fundamental biological, chemical, and physical research and practical studies covering operations from the field to the factory and the home. Four of the bureaus in the Agricultural Research Administration are actively engaged in this work: Plant Industry, Soils, and Agricultural Engineering; Entomology and Plant Quarantine; Agricultural and Industrial Chemistry (mainly at the Southern Regional Research Laboratory, New Orleans, La.); and Human Nutrition and Home Economics. In addition, the Research Administration Office of Experiment Stations handles the funds appropriated by the Federal Government for research by the States, including cotton research. A considerable amount of the State research is in cooperation with ARA bureaus.

STUDIES OF FIBER QUALITY AND PROPERTIES

Fundamental studies of the formation and growth of the fiber and of the structure of the fiber wall have supplied an understanding of the variations that exist in length, strength, and quality. It was found by microscopic and X-ray studies that the structure of the fiber from different varieties is different and that fiber structure is related to strength of fiber and strength of yarn. Methods have been devised for measuring individual fiber properties. Genetic research has revealed how strength, length, structure, and fineness of fiber are inherited, and manufacturing tests have indicated how these properties and combinations of them contribute to spinning performance and use value. All of this information has been utilized to evaluate the different varieties and determine their quality and mill value.

Chemical and X-ray studies of the composition and structure of the fiber are pointing to methods of treatment that improve the quality of cotton products and lead to new uses.

COTTON PRODUCTION

One-Variety Production

Since 1934 the development of one-variety communities throughout large parts of the Cotton Belt has been one of the outstanding achievements in our southern agriculture. The program, under consideration for many years, was begun in 1931, when there was general agreement that the one-variety plan offered the best prospect of continued successful production of cotton in this country. The practicability of production standardized on one variety had already been demonstrated in the irrigated valleys of our Southwestern States.

In 1943 there were 2,544 one-variety communities in various stages of development in 569 of the total of 736 cotton-producing counties in the United States with a membership of 305,801 participating farmers who planted 8,869,298 acres of cotton. This was more than one-third of the total acreage planted to cotton in the United States in that year. The extra cash return received by the growers in the one-variety communities in 1943 from larger yields and premiums for improved quality of staple is estimated at nearly $7.50 an acre over and above what they would have received if they had continued to plant the inferior varieties formerly grown. This represents a total additional income for the one-variety farmers of more than $66,000,000 in a single year.

The large supplies of pure seed of improved varieties of cotton with better staple that are always available in the one-variety communities made it possible to meet in a single season the exacting requirements of strength and durability for fabrics that went into the thousands of articles needed in the war.

Experience has shown that where production is on a single-variety basis, improvements in culture, harvesting, ginning, and marketing are more easily and effectively applied and the textile industry is assured of regular supplies in large volume of more uniform cotton of the same character of staple.

Cotton manufacturers through the South have recognized the superior quality of the one-variety cotton and many mills are now regular customers of communities where large blocks of the one-variety cotton of specific varieties are available.

The one-variety communities using recently developed varieties of superior quality are probably producing the best cotton in the world. Standardizing our entire production on a few of our best varieties is a logical future step.

Breeding Improved Varieties

Genetics and breeding research has developed techniques which make possible more rapid development of superior strains and varieties, and the new measures of quality referred to earlier are being applied in this work. The older varieties that were widely grown in different sections, especially strains of Cleveland and Mebane, produced relatively weak fiber, and this contributed in a large measure to the poor reputation of American cotton with European and some of the domestic mills. The staple length of our cotton has been increased and the widespread planting of such varieties and strains as Stoneville 2B, Deltapine 14, Acala 1517, Coker 100, and Wilds has given us cotton of much greater strength than was the case a few years ago. With one-variety communities, the varieties with desirable qualities can be brought into wide production very rapidly.

Soil and Fertilizer Investigations

Researches with legumes, fertilizers, cropping, soil management, and cultural practices have provided a basis for maintaining and increasing yields and have increased production efficiency. Turning under legume crops has increased yields from 100 to 700 pounds of seed cotton per acre, the average increase being about 300 pounds. While a complete fertilizer is usually required for cotton, nitrogen is the element needed in largest amount in most areas, though where cotton follows peanuts or soybeans potash is apt to be the limiting factor. Different varieties respond differently to some of the fertilizer elements. Light foliage varieties, for instance, require more potash than do those with heavy foliage. Improved fertilizer practices on some soils have increased oil content of seed, retarded certain diseases, hastened fruiting and maturity, and improved the quality of lint. Since high acre yields are essential for economical production, research along these lines continues to yield profitable returns.

Fortunately, soil maps, based on a comprehensive system of soil classification, have been made for considerably more than one-half of the area where our cotton is produced; but they are lacking in a good many important counties, and a few others, where the mapping was done many years ago, need to be remapped.

During the past 10 years increasing emphasis has been given the rating of the soil types according to the yields of adapted crops under various systems of management. This research has shown that the soils of southern United States vary widely in their adaptability to cotton. Many of those on which cotton cannot be grown efficiently are, however, well adapted to other crops. Further, the most efficient system of management for cotton production varies widely according to soil type. These greatly variable soil types are so intricately intermingled that each farm has its individual potentialities. One field may be well adapted to cotton and an adjacent one not, even though it is well adapted to some other valuable crop. It has been demonstrated that through consideration of such facts as the fundamental productivity of the soils and their responses to fertiliz lime, and other management practices, the efficiency of crop production on the individual farm can be greatly increased.

The completion of the soil maps and the further development of accurate productivity ratings for all soil types for adapted crops under various systems of management should contribute significantly to the efficiency of cotton production.

Control of Diseases

Cotton diseases greatly increase the hazards of production. In some cases they destroy the entire crop and in others reduce the yield. Research has aided in reducing the losses from seedling diseases, boll rots, rusts, and other diseases that occur over the entire Cotton Belt. Some farms where root rot and wilt and similar diseases are severe have been saved from abandonment. The control measures developed involve seed treatment, crop rotation, soil management, fertilizer practices, and the breeding of resistant varieties.

Prevention of Losses from Insects

Insect losses are an important item in the cost of production. According to the estimates of the Bureau of Agricultural Economics, the reduction from full yield due to insects averaged 13.1 percent annually from 1923 to 1943. The loss was over $700,000,000 in 1923 (the year the boll weevil became well established along the Atlantic Seaboard) and averaged about $230,000,000 annually for this 21-year period. The average annual cost of insect damage per pound of lint harvested during this period (1923-43) is estimated at 3.8 cents. It is thus evident that efficiency in production can be materially increased by reduction of insect losses.

Keeping out foreign pests.--In the other cotton-growing countries of the world there are numerous pests of cotton that do not occur in this country and that would cause serious losses if they should be accidentally introduced and established in the United States. The quarantines against foreign cotton and cotton products have been successful in preventing the introduction of most of these pests. The entry of the boll weevil and pink bollworm occurred by flight from the adjacent areas of Mexico. Inspectors at ports of entry enforce quarantine regulations designed to prevent the introduction of pests without unduly interfering with the entry of foreign cotton.

Control and eradication measures.--The pink bollworm is today the most serious insect menace that has ever confronted the cotton industry in this country. In most of the other cotton-producing countries of the world the damage it causes is comparable to that of the boll weevil in the United States. Its general establishment in this country would threaten cotton production over large areas.

The pink bollworm was found in the United States more than 25 years ago, but persistent efforts have so far prevented its spread over the Cotton Belt. It is established in Texas in areas adjacent to Mexico, and light infestations occur in a number of other counties in Texas, New Mexico, and Arizona. Last year it was found in two parishes in western Louisiana, in one of which a non-cotton zone is now in effect. A number of additional counties in Texas were found infested this year.

Suppressive measures used to reduce the pink bollworm population and the danger of spread include the regulation of date of planting, cleaning of fields, sterilization of seed, fumigation or other treatment of cotton lint, and quarantines against movement of infested products to other areas. This effort has become increasingly difficult and the work can be accomplished only if the whole cotton industry recognizes the importance of the pink bollworm and supports the control program.

Because of reinfestation by flight of moths, permanent eradication of the pink bollworm from the United States is dependent on a similar effort in Mexico at the same time. Mexico is cooperating with our Government in suppressive measures, but although conferences between United States and Mexican officials have been held to consider the possibility of eradication in both countries, such a program has not been undertaken. The only known method of eradication is to establish a non-cotton zone, which requires the elimination of all cotton, okra, and possibly other host plants over large areas, and logislation and appropriations by participating States. The difficulties of such a procedure might be overcome or reduced by using the non-cotton zone as part of a cotton acreage reduction program when circumstances warrant.

In limited areas, the white fringed beetle is another foreign pest of cotton against which suppressive and preventive measures are being used.

Development and improvement of methods of control.--That progress has been made in insect control is evident to all who recall the bankruptcy, demoralization, and panic in the cotton industry caused by the spread of the boll weevil across the Cotton Belt.

The development of calcium arsenate as a boll weevil insecticide saves cotton growers each year many times the $5,000,000 or less spent by the Government on cotton insect research since the work was first undertaken. The Extension Service of Alabama (Annual Report of State and County Extension Agents, 1943) estimates that the 4½ million pounds of calcium arsenate used in Alabama in 1943 saved cotton valued at over $6,250,000 from the boll weevil, or nearly $1.50 for each pound of the insecticide used. Since 1918, when calcium arsenate was first recommended for boll weevil control, its use has increased until approximately 65 million pounds were manufactured in 1943, most of which was used on cotton.

Control of the cotton flea hopper by methods developed by research often increases the yield by 25 to 100 percent; and control of Lygus and other bugs in the irrigated sections of the Southwest increases the yields and improves quality of cotton enough to add $10 to $15 an acre to the profits of growers.

Despite the progress that has been made, much remains to be done in developing control measures for insects for which no adequate control is known, in reducing the costs and improving the efficiency of methods now in use, and in securing more general use of these measures by growers. The pink bollworm presents one of the most pressing problems. None of the insecticides in general use are effective with this insect.

When calcium arsenate is used to control the boll weevil, damage caused by the cotton aphid is increased; and light sandy soils are also injured by this insecticide. Means of overcoming these difficulties would greatly increase the profits of growers and stimulate the wider use of calcium arsenate for weevil control. Improved methods of application are also needed. There is need of a more effective insecticide for the boll worm. Control methods for the cotton flea hopper that have given good results in the Gulf Coast area of Texas should be tested in the drier areas of that State and of Oklahoma. Control developed for the sucking insects that attack irrigated cotton in the Southwest is profitable, but it is known that much of the damage by these insects is not prevented; a more effective insecticide is needed especially for the stinkbugs that reduce the quality of the lint.

The new insecticide, DDT, has given encouraging results against the bollworm, some of the sucking insects, and the pink bollworm, but its effects on the soil and on plants have not been established. It shows little promise for the control of the boll weevil and the cotton leafworm, the two cotton insects for which the greatest quantities of insecticides are used, and it is of no value against the cotton aphid. However, the discovery of DDT has stimulated research on new synthetic insecticides. The thousands of organic materials that should be tested against cotton insects afford unlimited possibilities in the field of new insecticides and repellents. Other opportunities for more economical insect control are by the introduction of natural enemies and the breeding of varieties resistant to insect attack.

Surveys conducted to obtain information on the abundance of insects and the need for insecticides have been of value during the war. This year, 25,000 fields were examined for boll weevils, 5,000 for flea hoppers, and several thousand for leafworms and other insects, and the information obtained aided in the orderly distribution of insecticides and in advising growers when and where control was needed.

A difficult problem in insect control is to get timely use by growers of the methods that have proved effective. Adoption of control measures has been delayed because there are so many small growers and because the custom of planting more acres to take care of insect losses is so well established. Insect control is as essential in the economical production of cotton as is cultivation or the use of fertilizers, and it should be a regular farm practice.

Some of the changes and adjustments in cotton production that may be made after the war will undoubtedly intensify insect damage unless proper precautions are taken. On the other hand, the many new developments that have resulted from the war--new chemicals, new processes of manufacturing, new devices for applying insecticides, and new materials for improving dusting and spraying machinery--will provide better tools for insect control.

COTTON GINNING

Unlike many farm crops, cotton must be partially processed before it is sold so that any improvements in the ginning process result in an immediate and direct benefit to the producer. They are important also to industry since poor ginning makes a poor product, and natural quality destroyed in the gin cannot be restored.

The Cotton Ginning Laboratory, established at Stoneville in 1930, has developed improved methods which have been largely adopted by ginners in both the rain-grown and arid sections of the Cotton Belt and have resulted in better and cheaper ginning, better prices for growers, and a more valuable product for industry. The work at this laboratory is done in cooperation with the Office of Distribution of the War Food Administration and with the Mississippi Agricultural Experiment Station.

Miscellaneous Ginning Improvements

Over 20 Public Service patents have been taken out by the laboratory's technicians covering a series of improvements in gin machinery which are now coming into general use in all modern gins. Among the outstanding developments has been the cotton drier, by means of which cotton with high moisture content can be adequately ginned, thus enabling the gins to operate more continuously. The laboratory has also demonstrated the mechanical and economic feasibility of baling cotton at gins at a standard density of 22 pounds rather than at a low density of 11 pounds per cubic foot. Thus a 500-pound bale is reduced in size from about 54x27x45 inches to about 56x28x22, or about 50 percent. This large reduction makes for easier handling, reduces space requirements in storage houses and freight cars, and makes possible more direct and rapid transfer from the gin to the textile mill. High-density bales also go at a lower freight rate than those of low density.

The laboratory has worked out many other improvements--for example, better bale coverings; permanent identification tags which obviate the necessity for continued sampling; a modification of the gin baling mechanism which almost entirely prevents air cuts and also gives a bale with uniform density, thus doing away with rolling and big-end bales, which have been the cause of much difficulty and added expense in compressing; and various minor improvements in ginning machines and their operation, such as higher operating speeds, the use of the loose seed roll, better shapes of saw-teeth, improved pneumatic conveyors, and power-saving devices.

The importance of pure seed is such that the engineers have listed and recommended methods and equipment by which farmers can be assured of getting their own seed, even when the ginner handles several varieties of cotton.

Cleaner Lint Cotton

The Stoneville Laboratory is putting special emphasis on the development of better cleaning of cotton at the gin. Under present practices, all of the cleaning operations are done before the seed cotton reaches the gin saws. However, after ginning there is always a considerable amount of fine dirt and trash in the lint, sometimes as much as 5 or even 10 percent of the weight of the bale. In baling and compressing, this pepper trash is embedded in the lint and its removal at the mill is an expensive operation. The logical place to remove this dirt is at the gin, between the saws and the bale press, and investigations to develop equipment for this purpose are now under way. If successful, this improvement will increase the price received by the farmer, since the amount of pepper trash has considerable effect upon cotton grade. It will also reduce freight costs and speed up operations at the mill.

Unfortunately, much of the cleaning machinery necessary for good ginning is somewhat elaborate and expensive. It is beyond the reach of one- or two-stand gins with small annual output. Existing equipment should be modified or adapted to enable the small gins to do a better job without too much capital expenditure.

With the advent of the mechanical picker, the cleaning of cotton and the extraction of foreign matter will be problems of major importance. Mechanical cotton pickers have been developed and are being used to some extent in the picking of cotton, but no machine has yet been designed which does not gather a good deal of trash, leaves, and other foreign material. With present equipment the machine-picked cotton has a minimum of 5 pounds per bale of trash in excess of that contained in hand-picked cotton. Consequently a good part of the savings made in the picking are offset by reduced prices received for the cotton. The engineers are testing the use of chemicals for defoliating the cotton plants prior to mechanical harvesting in order to reduce the amount of trash picked with the cotton.

COTTON UTILIZATION

Cotton Fiber

The cotton utilization studies of the Southern Regional Research Laboratory include those on (1) the chemical and physical properties of cotton fiber, (2) the alteration of fiber properties and the effect of changes on finished cotton products, and (3) the modification of the properties of manufactured cotton products by various constructions and by finishing treatments. These studies are related to the production of cotton products with certain desirable characteristics. For example, the characteristics of manufactured products depend fundamentally on the fine structure of cellulose in the cotton fibers; and to produce stronger or more lasting products, it is necessary to understand the effects of light, heat, and chemical agents on the degradation of the cotton fiber and on the process of commercial cotton bleaching. To develop an improved cotton product such as a better tire cord it is necessary to study the effect of high temperature on cotton product, the mercerization characteristics of cotton of different varieties, and the effect of chemical modification or impregnation on the properties of cotton products.

As a result of such investigations a new, unlined fire hose has been produced, and an all-cotton elastic bandage is in small plant production, using several thousand yards of cotton cloth. The stabilization of nitrocellulose has been improved and test runs of a new stabilizing process have been demonstrated on full scale 2½-ton lots. A new and improved machine for slashing cotton textile warps is being fabricated, and also a machine for opening, cleaning, and blending cotton for textile processes.

Among the investigations on the modification of properties of manufactured cotton products by various constructions and by physical and chemical treatments are studies on the preservation of cotton fabrics against decomposition caused by weather, sea water, and micro-organisms; methods of improving flameproof, fireproof, and waterproof properties of cotton fabrics; and special finishes to improve the strength and durability of cotton products. The effect of swelling and stretching treatments on the properties of tire cords are being evaluated, and the elast properties of cotton tire cord are being studied. The development of heat resistant tire cord from mercerized yarns is under way.

Through these investigations, methods for determining the resistance of treated cotton fabrics to weather and micro-organisms have been devised. Experimentally, a fireproofing method has been developed for lightweight cotton fabrics which will withstand a dozen laundry trials.

Other investigations include the improvement of the adhesion of cotton tire cord to rubber and synthetic rubber, and the relationship of cotton tire properties and the construction of the cord to its "flex life" and tensile strength. An improved tensioning apparatus for the manufacture of cotton cord has been developed, and electronic, high frequency heating has been used for improved and rapid drying of cotton yarns and fabrics.

The effects of the treatments mentioned on the properties of tire cord and other cotton products are now being evaluated as part of an appraisal of cotton compared with other products for tire cord. Field tire tests, although as yet few in number, as well as laboratory tests have shown that the special cotton tire cords developed from these investigations consistently and materially outperform commercial cotton tire cords.

Cotton Seed

An inexpensive ammonia preservation process for the control of temperature and the free-fatty acid content of moist cotton seed has been so successful in ton-lot experimental runs that some plants are trying it on full commercial scale this season. Success of the process would mean the saving of large volumes of useful cotton seed oil now lost.

Cotton seed oil.--Investigations are being made in the modification of cotton seed oil to improve its usefulness in industry and provide new outlets. These include the physical behavior and characteristics of the oil under processing conditions, the composition of the oil and its by-products in relation to industrial utilization, and improvement of the flavor, odor, and keeping qualities of cotton seed oil and its derived products.

The work has demonstrated commercially that properly modified cotton seed oil can replace palm oil in tin and terne plate industries. Although the cost of the modified oil would be twice that of palm oil, its expected life in processing should be three times as long. The investigations have also shown that by a combination of controlled hydrogenation and low temperature solvent fractionation a hardened fat can be produced from cotton seed oil which has the consistency and other properties of imported cocoa butter, used extensively in foods, confectionery, and pharmaceutical products. With the same processing technique, a substitute for olive oil as a worsted lubricant has been made from cotton seed oil.

Substantial contributions have been made to methods and processes for improving the keeping qualities of oils, fats, and shortening, particularly for Lend Lease and Army shipments to the tropics. The investigations on the stability of cotton seed oil and the use of anti-oxidants have contributed to these advances.

Cotton seed meal and protein.-- As a result of the investigations on cotton seed meal and protein, adhesives have been developed from the meal which are adaptable in the field of tacky and rewettable glues for which there are enormous demands. Information developed from fundamental studies on the constituents of cotton seed and cotton seed meal, particularly on its enzyme system, are expected to contribute materially in the processing of the meal for the manufacture of new and improved industrial products.

Cotton Fabrics in the Home

Investigations in the home economics laboratories are concerned with designs and finishes for knitwear, especially women's cotton hose, for superior appearance, fit, and quality. Home economists have also cooperated with other agencies in formulating specifications for certain cotton fabrics. Other work with cotton products includes the making of designs for aprons, dresses, and children's garments that combine attractiveness with high functional utility.

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COTTON MARKETING SERVICES, MARKETING RESEARCH, AND NEW USES PROGRAMS

By Carl H. Robinson, Chief, Cotton and Fiber Branch, O. D.

My remarks will be limited to a brief outline of some of the important phases of our service, regulatory, and research work relating to cotton. These include standardization and classing, quality and price statistics, fiber and spinning testing, research on ginning, packaging, automatic sampling, and related subjects, and programs designed to encourage increased consumption.

Official standards for cotton were first promulgated some 30 years ago. Since that time the standards have been improved and supplemented from time to time, and they are now in general use not only in the United States but throughout the world wherever American cotton is spun. In fact many of the leading cotton trade and manufacturers' organizations in other countries have adopted our universal standards for the grade of American upland cotton. Thousands of official grade boxes and staple types are prepared each year and shipped to classifiers and others in the United States and throughout the world. The standardization authority is contained in the United States Cotton Standards Act and Cotton Futures Act.

The demand for official classification of cotton has increased steadily until now our employees each year are classing samples representing more than six million bales of cotton. One of our largest classing jobs is that under the Act of April 13, 1937, which makes provision for a free classing service for farmers who are members of groups organized to promote the improvement of cotton. Since this work was undertaken, in 1938, it has become very popular with farmers, the volume of classing having increased from considerably less than 100,000 bales classed in 1938 to the point where we are now classing each year well over three and a quarter million bales, for nearly 300,000 individual farmers whose reported cotton acreage is in excess of 40 percent of the total cotton acreage of the United States. In order to be eligible for the free classing service, farmers must organize an improvement group and arrange for their sampling agency to send samples to one of our classing offices. On receipt by the classing office the samples are classed and an individual certificate showing the grade and staple length of each sample is returned to the farmer. Spot prices at various principal markets are sent to the organized groups and arrangements have been made for radio broadcasts of futures prices several times a day. With this classification and price information in hand

the farmer can intelligently market his cotton. If such a service could be extended to all other cotton farmers and provision made for the classification of a representative sample from each bale ginned, various benefits to cotton growers in general could be expected. More specifically, the production of higher qualities of cotton throughout the belt would be encouraged, excessive sampling materially reduced or eliminated, and many farmers who are not now in position to obtain official classifications would be furnished specific information on each bale which would enable them to market their cotton according to its actual grade and staple length.

In addition to the classing work already mentioned, we are classing large quantities of cotton for Commodity Credit Corporation loan and purchase programs, for deliveries on futures contracts, and for other purposes. A considerable volume of classing work is also done by licensed classers in private employment who are under our supervision.

Under legislation passed in 1927, we are required to issue statistics or estimates of the grades and staple lengths of cotton carried over each year as of August 1, and also from time to time estimates of the qualities of cotton in the current crop as ginned. The estimates of the quality of current ginnings are based on the classification of samples from all bales ginned by selected gins representing about 10 percent of the total. Classification results have been returned to the ginner for his and his customers' use. Statistics on the quality of cotton by States and districts are issued to the public each ginning period. These quality estimates, along with the free classing service for farmers who are members of organized improvement groups, have contributed to cotton quality consciousness in the South and to improvement in the cotton crop. The average staple length of the crop has increased from slightly less than 15/16 inch in 1929 to about 1 inch in 1944. The cotton quality statistics and those compiled in our cotton market news work have made important contributions to the planning of various war and other programs.

Research designed to develop improved methods and reduce costs is conducted on the conditioning, ginning, cleaning, packaging, handling and marketing of cotton. The work on ginning and related processes is conducted in cooperation with the Bureau of Plant Industry, Soils and Agricultural Engineering--that organization being responsible for the mechanical engineering phases and our own organization for the effects of the use of various types of equipment and processes on the quality of cotton and on marketing.

At present, primary emphasis is being placed on problems of ginning, marketing, and processing incident to the adoption of mechanical harvesting. A special study of the possibilities of cleaning the lint between the gin stand and the bale press has recently been undertaken. Studies already made have indicated the mechanical and economic feasibility of gin presses capable of producing bales of standard density which would obviate the need

for recompression of bales for domestic shipment. Two commercial installations of these presses have been made and have proved a success under commercial conditions. Various other accomplishments of our research people hold considerable promise for the future. Among these is an automatic sampling device which makes it possible to obtain a truly representative sample of all of the cotton in a bale as it is formed at the gin and which obviates the need for cutting the bales for samples. This sampling device can be installed with standard gin equipment. It diverts, at intervals throughout the ginning of the bale, a portion of the lint from the lint flue through a special duct to a small scale condenser which condenses the lint into a bat similar to that fed into the bale press. The pressing equipment for the sample is rotated automatically with the turning of the bale press. The sample obtained by this equipment represents the cotton throughout the entire bale rather than just the cotton on the two sides of the bale as is the case with the present system of sampling. The eventual wide-spread use of higher density gin presses and automatic sampling devices, along with the standardization of cotton bale covering materials and perhaps net weight trading in cotton, should contribute measurably to economies in cotton handling, and should go a long way toward improving the physical appearance of the American bale.

A new and important phase of the work of our cotton fiber and spinning laboratories is the testing on a fee basis of the physical properties of cotton fibers such as strength, fineness, maturity, and uniformity, and the performance of particular cottons through manufacturing processes. These tests are made for cotton breeders, producers, manufacturers, and others, and are proving helpful in evaluating the qualities of new varieties and strains in the early stages of development and in aiding cotton merchants and manufacturers in locating those varieties and growths of cotton most suitable for specific uses.

Our laboratories are also conducting, on a cooperative basis, the testing for the Federal and State agricultural experiment stations in connection with their cotton breeding work and for their annual tests to determine the relative merits of the principal improved varieties and strains of cotton under the growth conditions prevailing in the various producing areas.

An important by-product of our extensive fiber and spinning testing activities has been the accumulation of what is perhaps the largest and best body of data on fiber properties and spinning performance in existance. Statistical analyses are now in progress to establish the relationships of the various measurable fiber properties to processing performance and to yarn and fabric quality. Facts concerning these relationships will indicate to cotton breeders those fiber properties that should be incorporated in the new varieties and strains being developed, and will aid spinners in selecting cottons needed for best results in the manufacture of various types of cotton goods.

Our Utilization and Diversion Division conducts programs designed to encourage increased consumption of cotton and cotton products and to bridge the gap between the laboratory stage of development and the commercial acceptance on a self-sustaining basis of new uses for cotton. Examples of these programs are those undertaken to encourage the use of cotton for insulation, cotton wrappers for cotton bales, and cotton for binder twine. The cotton insulation program offers promise of a new annual outlet for perhaps several hundred thousand bales of the lower grades and shorter staples. Some projects have had to be held in abeyance because of the war.

We shall be glad to supply more complete information on any phase of our work or to assist the Committee in any way that may be desired.

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SOIL CONSERVATION AS RELATED TO INCREASED YIELDS AND PRODUCTION

By J. W. Sargent, Assistant Regional Conservator, Soil Conservation Service

For at least one hundred years the ills of southern agriculture have engaged the attention of the Nation. The plight of the cotton farmer has been deplored, and many attempts have been made to improve his condition. Regardless of all the efforts which have been made by himself and in his behalf, his economic position has, during the greater part of the period, been unsatisfactory. Usually he has not received just recompense for his labors. May not this be due to the fact that he has been only a cotton farmer, producing that crop almost to the exclusion of all others, and at the expense of the fertility of his land.

We in the South expect to continue to grow cotton, to produce this crop in competition with other parts of the world. We recognize, however, that in order to do this we must do a better job than ever before. We must produce more efficiently, plant only the most suitable acres and protect them from erosion, use only varieties of highest quality, fertilize more intelligently, use more machine and less hand labor, consider cotton as one crop in our agriculture rather than as a single objective.

An important phase of the post-war cotton problem will be the production of other income-producing crops to supplement income from cotton. New sources of income must come through changes in the use of land. Since soil conservation is based on the principle of using all land on each farm according to its capabilities and treating it according to its needs, new sources of income may be expected on farms where soil conservation programs are established.

That this can be done without sacrifice of production has been admirably proven by countless farmers throughout the South. Five thousand two hundred and sixty-one (5,261) farmers operating 1,742,323 acres of land in 13 Southern states report significant results. These farmers are from the group of 162,550 cooperators with soil conservation districts utilizing the technical assistance of the Soil Conservation Service and other aids. Their changes in land use and production are based on averages of 2 to 4 years prior to and a similar period following the establishment of conservation farming, to the extent of 70 to 100 percent completion.

1. Land Use Changes

Cropland changed from 669,543 to 641,992 acres - Average decrease 4.1%
(Decrease by states from .1% Arkansas to 13.7% Florida)
Grazing land changed from 811,468 to 910,303 acres - Average increase 12.1%
(Increase ranging from approximately 40 percent in the Southeast to 4% in Texas)
Idle land changed from 61,697 to 5,356 acres - Average decrease 91.3%
(Decrease by states from 54.9% Kentucky to 99.8% Florida)

2. Some Specific Crop Acreage Changes and Significant Results

Cotton acreage reduced, average, 19.6%. (Reduced by states from 6.5% Mississippi to 38.1% Florida). Production per acre increased, average, 32.8% - (Increase by states from 25% Texas to 102.2% Virginia) and total number of bales produced on these farms increased average 6.7% - (Change by states of from decrease of 2.1% Alabama to increase 43% Louisiana).

Corn acreage reduced, average, 15.1% - (From a decrease of 30.5% Alabama to an increase of 22.7% Florida). Production per acre increased 39.2% - (From 27% Texas to 62.6% Virginia) and total number of bushels produced on these farms increased 18% - (From 1.9% Alabama to 73.5% Florida).

Wheat acreage reduced 12.5%, production per acre increased 46.9%, and total number of bushels produced increased 27.7%.

Acres in legume hay increased 60.7% - (from 4.6% Kentucky to 145.2% Florida), and total production increased 84.4%.-(from 12.4% Virginia to 180.1% Alabama). Acres in non-legume hay increased 12%, and total production increased 42% with Louisiana and Alabama leading the increase.

The following changes in livestock population occurred on these farms:

Dairy cattle increased 40.4% - (from 15.3% Tennessee to 84.6% No. Carolina)
Beef cattle increased 117.4% - (from 14% Texas to 192.4% Georgia)
Brood sows increased 87.2% - (from 6% Louisiana to 154.8% No. Carolina)
Ewes increased 66.0% - (from 16% Texas to 866.3% Alabama)
Chickens increased 76.6% - (from 36% Louisiana to 201.9% Florida)
Turkeys increased 32.4% - (from 8% Louisiana to 1108% Tennessee)

Conservation farming means better, wiser land use. It means increased sustained production. It means using all the acres on the farm, thus providing land for crops substituting for cotton. It means the basis for a permanent agriculture on land kept permanently productive. Conservation farming won't correct all the perplexing, economic ills of the cotton industry, but without it, the ills, particularly of the producer, and finally of the industry, must increase. It's fundamental, therefore, to any future progress.

The future cotton industry cannot be safely planned without consideration of proper land use. Using the land according to its capability—selective service for each acre—and treating it according to needs is not the only fundamental, but without it cotton production, and as for that, the entire agriculture of the future, will continue in jeopardy.

Fundamentally, therefore, any successful program for agriculture must be based on treating the land according to its needs. This calls for land classification, farm by farm and acre by acre, to the end that each acre has the opportunity to render its maximum service.

We are committed to the policy of Selective Service, not only of our manpower, but of our factories in meeting war production goals. Selective service of acres in meeting agricultural production requirements for the post-war as well as the war period means meeting these requirements on a basis of sustained yield, and is certainly of as much importance as selective service in any undertaking. Carefully selecting the best use to which farms, fields, and acres may serve based on physical ability of land to produce continuously, adjusted to economic requirements, and treating these farms, fields, and acres in accordance with their needs and adaptability means guaranteeing a permanent agriculture. Actually locating these acres by their physical characteristics, determining the use in which these varied lands can make their best contribution, and specifying the treatment that they must receive is a big order, but we know of no prospect of a permanent agriculture without it.

We are in an all-out fight, which does not end with military victory. We must win that victory, of course. But it's more than our Army against our enemy's, it's more than our Navy against theirs—it's that and our farms against theirs also, and against our unknown future, not for the duration only, but for the long pull for sustained production. That's why we insist on "Selective Service for each Acre." We can't have poor, mis-used, ill-treated, washed-away, unproductive land represent us now or in the peace to follow.

The meaning of "Selective Service for each Acre" is illustrated by the photograph on the following page.

Every acre of agricultural land can be made to produce the things needed now and later, but we do not expect to produce planes in a shell factory, nor tanks in a shipyard. Neither can we expect sustained economic production of cotton, corn, peanuts or other row crops on steep or eroded land best suited to trees or grass, because row crops cause severe soil losses, which quickly make the land unfit for any productive use, perhaps for many years to come. Look again at the green area—No. 1 land—in the photograph. Green is the "go" signal, and means that this land can be used extensively for row crops without danger.

Yellow means caution, and this land, No. II, may be used but needs protection—winter and summer covers, contouring, rotations, with lime and fertilizer as needed. Without such protection it may be expected to yield a bale of cotton for twelve tons of soil. If the land is protected, the bale of cotton may cost only three tons of soil. Without protection, the land may last 35 years under continuous use, but with protection the farmer can reasonably expect it to last upwards of 100 years, depending on the degree of protection.

The larger part of this farm, as of most cotton farms, is No. III land. In the photograph, it is red, the danger signal. This land can be used, but it will be destroyed quickly unless the proper conservation practices are applied. Such land generally is steep, or poor, or badly gullied—or all three. The treatment required necessitates a careful analysis and the application of proper intensive treatments before the land can be used safely for row crops. Land of this sort will produce cotton, but the cotton will cost around seventy-five tons of soil per bale without protection, and we cannot expect sustained yield. With protection, the cotton will cost around twelve tons of soil per bale, which represents a saving we can't afford to miss.

Other lands shown in the photograph are not generally suitable for row crops. If the land's capability is determined, and proper conservation practices understood and applied, every acre may be kept in sustained production.

We cannot maintain—let alone increase—agricultural production, economically or otherwise, on eroded, wasted, depleted soils. Our agricultural production experience of 25 years ago—during and after the first World War—should serve us well now. In that emergency we brought a vast new acreage of land under the plow which actually increased production about 5 percent, but which, furthermore, created another emergency—the dust bowl in the West and increased gullying in the Southeast. There must be no repetition of those errors. They are unnecessary. Today, with less labor, less fertilizer, less farm machinery, and less new land, agricultural production is being increased. Favorable seasons have helped and the determination, dependability, and ability of farmers has been vital, but this new "farm tool"--using the land according to its capabilities and treating it according to its needs--including application of needed soil and water conservation practices, accounts for no small part of the increased production, and promises even greater and more permanent agricultural gains.

LAND USE CAPABILITY CLASSES

SUITABLE FOR CULTIVATION		NO CULTIVATION-PASTURE, HAY, WOODLAND AND WILDLIFE	
I	REQUIRES GOOD SOIL MANAGEMENT PRACTICES ONLY	V	NO RESTRICTIONS IN USE
II	MODERATE CONSERVATION PRACTICES NECESSARY	VI	MODERATE RESTRICTIONS IN USE
III	INTENSIVE CONSERVATION PRACTICES NECESSARY	VII	SEVERE RESTRICTIONS IN USE
IV	PERENNIAL VEGETATION-INFREQUENT CULTIVATION	VIII	BEST SUITED FOR WILDLIFE AND RECREATION

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM CREDIT ADMINISTRATION

Material for Presentation to the Special Committee of the House Committee on Agriculture on Post-war Farm Program - Hearings on December 4, 1944

Farm Credit Administration Serves Cotton Farmers

By Ivy W. Duggan, Governor, Farm Credit Administration

The Farm Credit Administration through its various units assists in the production and marketing of cotton. It makes available long- and short-term credit to farmers producing cotton. It finances the marketing and processing of cotton and cotton products through farmers' cooperative associations. Its Cooperative Research and Service Division in Washington, D.C., its Economic and Credit Research Division in Kansas City, Missouri, and its directors of research in the district offices carry on research projects, some of which relate to cotton and cotton products.

Loans and discounts made through the Farm Credit Administration to farmers and their cooperatives in the 10 principal cotton States in the first 9 months of 1944 amounted to $250,771,165 or 34.8 percent of the total for the United States. Production credit association loans accounted for $118,213,890, which was 32.3 percent of the total for the country. Federal land bank and Land Bank Commissioner loans closed in the 9 months amounted to $18,952,774 or 24.4 percent of the total amount of these loans closed in the United States. In the 10 States 37.9 percent of the farm mortgage debt outstanding on January 1 of this year was held by the Federal land bank and Land Bank Commissioner compared with a national average of 33.4 percent. There were 95.8 percent of land bank and Commissioner loans with all matured installments paid in full on September 30 compared with 92.6 percent for the entire country. Emergency crop loans made in the 10 cotton States in the 9-month period amounted to $11,272,445 or 63.9 percent of the country's total. For the year ended June 30, 1944, the banks for cooperatives made 301 loans totaling $207,789,722 in the 10 States compared with $416,168,106 for the entire country.

PRODUCTION CREDIT

There are 183 production credit associations located in the 10 major cotton producing States. These associations with their 325 branch offices make short- and intermediate-term loans to cotton farmers for all purposes entering into the production of the crop. In addition to providing for the ordinary costs of production, the associations also extend credit for such purposes as purchase of work stock, farm machinery, terracing, and soil improvement.

Besides making loans for production purposes, the associations are qualified as lending agencies with the Commodity Credit Corporation and, as such,

participate in the loan programs of that organization. The service of production credit associations in connection with CCC activities is restricted to member-stockholders. Recently steps also have been taken by the associations to aid in the cotton purchase plan of the Commodity Credit Corporation.

Emergency crop and feed loan offices in Columbia, South Carolina; Memphis, Tennessee; Wichita, Kansas; and Dallas, Texas, serving the Cotton Belt, make loans, including those for the production of cotton, to small farmers unable to obtain credit from other sources at reasonable rates.

In addition, the Federal intermediate credit banks, besides furnishing the major portion of the funds used in making production credit association loans, discount a substantial amount of agricultural paper for other financing institutions, a large part of which goes for the production of cotton.

FARM MORTGAGE CREDIT

There are 554 national farm loan associations in the 10 principal cotton States which handle the making of Federal land bank and Land Bank Commissioner loans. These are long-term loans made to farmers on the security of farm mortgages and they may be used to purchase land, to provide buildings, to refinance indebtedness, etc.

FINANCING COTTON COOPERATIVES

The Central Bank for Cooperatives in Kansas City, Missouri, and 6 district banks for cooperatives finance the operations of cooperative cotton marketing associations, cooperative cotton gins, and cooperative cottonseed oil mills. The banks also purchase or make loans on documents qualified for loans, purchase, or payment by the Commodity Credit Corporation. They finance cooperative purchasing associations through which many cotton farmers buy supplies, such as fertilizer, feed, etc., needed in cotton production.

RESEARCH

Cooperative associations have made substantial contributions to the more efficient production, distribution, and processing of cotton and related products in the past, and will be in a position to make even greater contributions toward improving the economic position of cotton in the post-war period. The research work of the Cooperative Research and Service Division has been directed toward providing these associations with information on methods of organization, accounting procedures, operating and other costs data, and the factors affecting these costs, new technical developments, and related matters. This research has enabled cotton cooperatives to increase their members' returns from cotton and thus help improve its competitive position. Some of the past and expected accomplishments of cotton cooperatives by type of activity, together with some of the research that has been done or is contemplated, is given below.

Production and Distribution of Cotton Planting Seed

There are now two large-scale cooperative cotton planting seed associations in operation which are furnishing their members with high grade seed of well-adapted varieties. In addition, one large cooperative cotton marketing association is supplying its members with planting seed in cooperation with a State-wide cotton improvement program. In many other areas cooperative cotton gins are distributing approved planting seed and are serving as local points around which one-variety cotton communities are developing.

With the experience that cooperatives have had in handling plant seed and because of their intimate association with producers, they will be in a particularly good position in the post-war period to expand their seed distribution program. Considerable research is needed, however, to determine the best means of multiplying the seed of improved varieties and of getting it distributed through cooperative channels. Such a research program should be handled on a cooperative basis with State, Federal, and other officials participating.

Ginning

Cooperative gins, in excess of 500 in number, have increased farmers' returns from cotton by doing a better job of ginning, thus more nearly preserving the original quality of the cotton, and by reducing the costs of ginning. Reports of the Oklahoma Corporation Commission for the 1943-44 season show that 65 cooperative cotton gins in Oklahoma ginned an averace of 1,270 bales per gin, with an average net return of $1,446 per gin, as compared with 406 privately operated gins which ginned an average of 589 bales each and showed an average loss of $345 per gin. This means that Oklahoma farmers patronizing cooperative gins received approximately $94,000 more for their cotton than farmers patronizing privately owned gins. In addition, they received larger returns for their cotton because a better job of ginning was done.

The Cooperative Research and Service Division in recent years has made research investigations designed to provide cooperative gins and interested groups of farmers with information on methods of organizing cooperative gins, accounting procedures, factors affecting costs of operation, membership relations, and other related matters. Its cost studies showing the relation between number of bales ginned and per bale ginning costs have frequently been used in determining whether a new cooperative gin should be established in a given area. These studies show that cooperative gins have ginned about twice as large a volume of cotton as privately owned gins and that their operations have resulted in substantial savings to farmers.

On the basis of past experience, further expansion of cooperative gins in the post-war period will mean added income to farmers for their cotton, and hence better its competitive position. A research study is contemplated which will show the economic effects of the adoption of the new type

standard density gin press on cotton handling charges, and a method of getting this press into general use by cooperatives.

Processing Cottonseed

Farmers now own and operate 13 cooperative cottonseed oil mills. The success of these mills, like that of gins, has been based on large volume and and efficient processing. Not only have cotton producers received patronage refunds in addition to prevailing prices for cottonseed, but because of the competition provided by cooperative mills, the prevailing prices of cottonseed have been raised in many instances above the level which would have prevailed had cooperatives not been operating.

Indicative of the increased returns received by farmers for cottonseed marketed through a cooperative mill is the case of the Farmers' Cooperative Oil Mill of El Paso, Texas. During the 8 seasons, 1935-36 through 1942-43, farmers received an average annual return of $3.50 per ton more for their cottonseed than prevailing average prices at time of ginning or a total for the period of $315,000.

As more cooperative mills are organized in the post-war period, additional producers can benefit from increased returns on their cottonseed. There is real opportunity for still further increasing farmers' returns from cottonseed through the establishment of cooperative vegetable oil refineries. Cooperative cottonseed oil mills are planning to enter this field in the post-war period and the Cooperative Research and Service Division is planning to provide them with information on such matters as method of organization, location and type of plant, means of disposing of products, and costs of operation. Similar research studies have been made of cooperative cottonseed oil mill operations and have been widely used by Banks for Cooperatives, and cooperative mills, and groups of farmers interested in organizing cooperative mills.

Cotton Marketing

During the 1942-43 season, 16 large-scale cooperative cotton marketing associations handled 1,476,220 bales of cotton for their members, or approximately 12 percent of the total crop. While it is difficult to measure the actual amount of increased returns which farmers have received for their cotton marketed through cooperative associations, it can be assumed that the gains have been substantial. With the introduction of a cotton loan program, cotton cooperatives have worked closely with Commodity Credit Corporation in placing cotton into loans, using Form G which was especially designed for use by cooperatives. These associations, through their close contact with members, have kept them informed as to the value of their cotton, enabling them to obtain prices in excess of loan values in many

instances. In general, cooperative cotton marketing associations have handled their members' cotton efficiently and have provided producers with a competitive outlet for their cotton.

Outstanding among the cotton cooperatives is the record of the Staple Cotton Cooperative Association. This association beginning operations in 1921 had handled 5,268,498 bales of cotton with a value of $442,000,000, as of August 31, 1944. On this same date it had assets of approximately $4,750,000. In addition, this association made production credit loans for the period 1924 to 1940 in excess of $54,000,000. The loss ratio on these loans was less than one-half of one percent.

In addition to marketing cotton and providing production credit, cooperative cotton marketing associations are handling fertilizer, cotton poison, gin supplies, and in some instances operating cotton warehouses and supplying cotton planting seed.

Cotton marketing associations with their diversified and integrated opertions should continue to exert a strong influence toward increasing farmers' returns from cotton through more efficient handling of cotton and the provision of credit, farm supplies, and other services to producers at cost. Several research studies have been made by the division for the purpose of improving the operations of these associations. Much more work of this nature is needed, together with a broader program covering handling, sampling, bale identification, grading, spinning tests, and buying and selling procedures of mills.

The Economic and Credit Research Division and the directors of research in the FCA district offices serving the principal cotton States are engaged in research on various projects.

All of the Farm Credit district research divisions prepare quarterly reports by type-of-farming areas within States which show the trend of farm real estate sales prices, activity in the farm real estate market, and types of buyers and sellers.

The regular quarterly reports of the districts on the "Farm Real Estate Situation" are summarized in a national report by the Economic and Credit Research Division.

As another part of the Farm Credit Administration's research program in the farm real estate situation, quarterly estimates are made on the number and amount of farm mortgages recorded and farm foreclosures. Data for these estimates are received from approximately 1,300 counties in the United States. This information, together with that obtained on the farm real estate market, makes possible the determination of developing

inflationary trends in local areas. Every two years a study is made of contract interest rates on farm mortgages recorded by States. Analysis has been made by the district research divisions of the source of funds used by borrowers to pay Federal land bank and Commissioner loans in full. This study is made on a semi-annual basis for the purpose of observing shifts in the source of funds from which loans are paid.

Publications Available

The following publications on cotton and cottonseed are available from the Director of Information and Extension, Farm Credit Administration, Kansas City 8, Missouri.

Accounting Principles for Cooperative Cotton Gin Associations. Bulletin 2, 92 pp.

Analysis of the Business Operations of Cooperative Cotton Gins in Oklahoma, 1933-34. Bulletin 12, 96 pp.

Expenses, Income, and Dividends of Oklahoma and Texas Cooperative Cotton Gins. Bulletin 41, 62 pp.

Early Developments in Cooperative Cotton Marketing. Circular C-101, 46 pp.

Organizing a Cooperative Cotton Gin. Circular C-109, 66 pp.

Development of Cooperative Cotton Ginning. Circular C-112, 68 pp.

Crushing Cottonseed Cooperatively. Circular C-114, 27 pp.

South Brazil - New Land of Cotton. Circular C-117, 47 pp.

Using Your Co-op Gin. Circular E-9, 12 pp.

Volume as a Key to Successful Cooperative Gins. Leaflet L-3, 8 pp.

Cooperative Possibilities in Cottonseed-Oil Mills. Leaflet L-4, 8 pp.

FARM CREDIT ADMINISTRATION

Loans and discounts outstanding September 30, 1944, for selected States

Item	United States total	Total 10 States	North Carolina	South Carolina	Georgia	Alabama	Mississippi	Louisiana	Arkansas	Tennessee	Oklahoma	Texas
Farm mortgage loans:												
Federal land bank:												
Number	435,374	133,756	8,348	5,462	9,932	14,479	11,348	7,390	7,187	8,243	10,708	50,659
Amount	$1,193,732,941	$264,202,171	$11,809,125	$9,444,393	$15,142,290	$18,549,875	$18,053,083	$13,866,268	$11,246,357	$14,227,234	$21,911,908	$129,892,629
Land Bank Commissioner:												
Number	283,064	90,846	9,293	6,972	11,487	8,322	7,367	3,544	4,346	5,811	8,748	24,956
Amount	$350,613,464	$83,521,150	$8,707,646	$6,625,263	$9,755,843	$5,038,590	$4,562,885	$3,022,954	$3,645,099	$4,798,501	$8,076,946	$29,287,423
Total:												
Number	718,438	224,602	17,641	12,434	21,419	22,801	18,715	10,934	11,533	14,054	19,456	75,615
Amount	$1,544,346,405	$347,723,321	$20,576,771	$16,069,656	$24,897,142	$23,588,465	$22,615,968	$16,889,222	$14,891,456	$19,025,735	$29,988,854	$159,180,052
Loans to cooperatives:												
Federal intermediate credit banks (direct)	300,000	-	-	-	-	-	-	-	-	-	-	-
Banks for cooperatives (including Central Bank):												
Number	1,318	358	6	1	9	20	38	24	19	7	40	194
Amount	$131,827,815	$55,517,798	$3,531,595	$51,800	$10,615,995	$1,519,830	$2,781,368	$2,424,535	$1,481,317	$7,922,361	$7,201,181	$17,987,816
Agricultural Marketing Act revolving fund:												
Number	32	12	-	2	1	1	2	-	-	2	1	3
Amount	$2,526,261	$1,310,532	-	$70,465	$206,000	$81,652	$127,976	-	-	$200,000	$225,000	$399,439
Total:												
Number	1,350	370	6	3	10	21	40	24	19	9	41	197
Amount	$134,654,076	$56,828,330	$3,531,595	$122,265	$10,821,995	$1,601,482	$2,909,344	$2,424,535	$1,481,317	$8,122,361	$7,426,181	$18,387,255
Short-term credit:												
Federal intermediate credit banks - loans and discounts for:												
Production credit associations and banks for cooperatives a/	268,952,272	89,341,636	10,755,432	3,535,400	10,153,201	5,621,732	10,860,495	6,337,258	7,083,170	3,862,000	4,985,802	26,147,146
Other financing institutions	29,913,581	15,803,028	148,627	5,200	-	234,938	3,871,175	1,427,508	507,611	1,345,932	1,236,093	7,025,944
Production credit associations:												
Number	174,906	71,524	11,835	4,181	7,203	5,840	9,413	4,299	6,032	4,844	3,297	14,580
Amount	$245,651,281	$81,049,867	$7,932,581	$3,393,919	$7,049,748	$5,717,738	$10,570,189	$6,313,453	$7,161,841	3,891,624	$3,695,496	$25,323,278
Regional agricultural credit corporations:												
Number	25,045	10,432	328	1,882	1,216	230	338	457	677	613	2,948	1,743
Amount	$19,279,878	$3,662,515	$103,004	$280,258	$420,207	$62,045	$144,138	$213,673	$247,810	$140,572	$1,045,786	$1,005,022
Emergency crop loans:												
Number	1,075,393	508,334	38,965	55,640	63,637	32,895	54,297	39,238	86,421	23,359	27,802	86,080
Amount	$112,319,951	$29,841,018	$2,519,425	$3,275,630	$3,570,833	$2,167,677	$2,131,135	$1,936,646	$3,502,250	$1,091,972	$1,973,856	$7,671,594
Drought relief loans:												
Number	177,054	44,640	-	-	-	b/ 1	-	6,402	8,518	-	6,530	23,189
Amount	$38,040,053	$3,760,272	-	-	-	b/ 75	-	340,358	379,407	-	447,057	2,593,375
Total:												
Number	1,452,408	634,930	51,128	61,703	72,056	38,966	64,048	50,396	101,648	28,816	40,577	125,592
Amount	$714,172,471	$223,458,336	$21,459,069	$10,490,407	$21,193,989	$13,804,205	$27,577,132	$16,568,396	$18,882,089	$10,332,100	$13,384,090	$69,766,359
Net total:												
Number	2,172,196	859,902	68,775	74,146	93,485	61,788	82,803	61,354	113,200	42,379	60,074	201,404
Amount	$2,124,220,685	$538,668,351	$34,812,003	$23,146,928	$46,759,925	$33,372,420	$42,241,949	$29,545,395	$28,171,692	$33,618,196	$45,813,323	$221,186,520

a/ In order to avoid duplication the amount of these loans and discounts is excluded from the net total.
b/ Transferred from drought area.

FARM CREDIT ADMINISTRATION

Loans and discounts outstanding September 30, 1944, for selected States - continued

Item	Virginia	Florida	Missouri	Arizona	New Mexico	California
Farm mortgage loans:						
Federal land bank:						
Number	6,871	3,078	10,680	1,502	3,101	12,030
Amount	$15,161,184	$6,407,812	$25,522,429	$5,603,264	$5,857,530	$56,612,896
Land Bank Commissioner:						
Number	2,796	3,644	8,936	908	1,499	11,890
Amount	$2,810,719	$4,462,871	$9,998,357	$1,701,456	$1,675,730	$23,462,344
Total:						
Number	9,667	6,722	19,616	2,410	4,600	23,920
Amount	$17,971,903	$10,870,683	$35,520,786	$7,304,720	$7,533,260	$80,075,240
Loans to cooperatives:						
Federal intermediate credit banks (direct)	-	-	-	-	-	-
Banks for cooperatives (including Central Bank):						
Number	11	30	36	3	7	85
Amount	$875,363	$2,182,659	$3,658,395	$228,452	$478,312	$10,052,610
Agricultural Marketing Act revolving fund:						
Number	-	-	-	-	-	-
Amount	-	-	-	-	-	-
Total:						
Number	11	30	36	3	7	85
Amount	$875,363	$2,182,659	$3,658,395	$228,452	$478,312	$10,052,610
Short-term credit:						
Federal intermediate credit banks - loans and discounts for:						
Production credit associations and banks for cooperatives 1/	3,658,340	3,742,370	9,815,940	2,295,000	2,719,782	19,077,793
Other financing institutions	19,100	17,480	378,832	1,150,062	689,003	2,492,425
Production credit associations:						
Number	3,626	1,477	6,864	510	590	3,949
Amount	$3,667,081	$3,363,785	$8,137,480	$2,372,864	$2,772,177	$14,827,898
Regional agricultural credit corporations:						
Number	317	226	562	2	229	346
Amount	$213,398	$149,204	$229,715	$1,135	$236,491	$1,527,167
Emergency crop loans:						
Number	28,866	12,909	20,226	1,132	17,213	1,870
Amount	$2,186,646	$1,490,034	$1,367,732	$216,844	$1,974,964	$377,188
Drought relief loans:						
Number	-	416	8,663	48	2,686	207
Amount	-	59,362	808,957	11,542	481,501	36,652
Orchard rehabilitation loans:						
Number	-	-	1	-	-	-
Amount	-	-	1,000	-	-	-
Total:						
Number	32,809	15,028	36,316	1,692	20,718	6,372
Amount	$9,744,565	$8,827,235	$20,739,656	$6,047,447	$8,873,918	$38,339,123
Net total:						
Number	42,487	21,780	55,968	4,105	25,325	30,377
Amount	$24,933,491	$18,138,207	$50,102,897	$11,285,619	$14,165,708	$109,389,180

1/ In order to avoid duplication the amount of these loans and discounts is excluded from the net total

Number and amount of loans made by years, May 1, 1933, through December 31, 1943, and during the 9-month period ended September 30, 1944, for the States of North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, Arkansas, Tennessee, Oklahoma, and Texas

Item	May 1, 1933 through December 31, 1933		Calendar year 1934		1935		1936		1937		1938		1939	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Farm mortgage loans:														
Federal land banks	5,911	$23,205,400	33,878	$116,930,691	7,644	$26,853,100	4,219	$15,051,900	3,506	$10,553,129	4,079	$10,635,572	3,976	$11,753,700
Land Bank Commissioner	14,458	20,028,976	87,118	119,538,128	18,104	25,694,899	9,336	12,984,090	6,462	8,360,653	6,280	7,551,695	6,068	7,856,250
Total	20,369	43,234,376	120,996	236,468,819	25,748	52,547,999	13,555	28,035,990	9,968	18,913,782	10,359	18,187,267	10,044	19,609,950
Loans to cooperatives:														
Federal intermediate credit banks (direct)	a/	8,515,899	a/	27,677,418	a/	22,856,361	a/	1,152,500	a/	1,093,000	a/	920,000	a/	1,512,000
Banks for cooperatives (including Central Bank)	a/	a/	b/ 227	33,954,679	294	16,539,095	254	30,169,013	306	31,240,934	256	32,672,465	276	23,287,639
Agricultural Marketing Act revolving fund c/	a/	a/	b/ 21	29,447,620	25	10,327,724	7	822,500	14	6,713,950	13	3,488,447	8	3,477,500
Total		8,515,899	248	91,079,717	319	49,723,170	261	32,144,013	320	39,046,884	269	37,080,912	284	28,277,139
Short-term credit:														
Federal intermediate credit banks - loans and discounts for:														
Regional agricultural credit corporations, production credit associations, and banks for cooperatives d/	a/	18,436,099	a/	42,272,808	a/	57,405,251	a/	82,998,493	a/	103,185,308	a/	106,536,896	a/	110,133,058
Other financing institutions	a/	50,230,305	a/	62,799,980	a/	59,980,838	a/	55,576,662	a/	54,903,776	a/	50,799,795	a/	50,668,786
Production credit associations	-	-	66,953	26,529,027	97,701	46,546,644	105,231	59,255,943	105,663	73,976,757	104,368	78,554,077	98,603	85,830,194
Regional agricultural credit corporations e/	a/	a/	b/18,316	35,648,455	39	14,245,516	3	5,944,658	7	1,543,268	-	787,876	-	453,633
Emergency crop loans	30,751	3,242,322	286,369	20,379,954	221,043	19,868,430	133,518	10,381,225	133,922	13,096,135	107,310	9,728,980	91,165	8,503,300
Drought relief loans	-	-	64,715	4,542,611	11,408	4,713,865	-	-	-	-	-	-	-	-
Total	30,751	71,908,726	436,353	192,172,835	330,191	202,760,544	238,752	214,156,981	239,592	246,705,244	211,678	246,407,624	189,768	255,588,971
Net total	51,120	$105,222,902	557,597	$477,448,563	356,258	$247,626,462	252,568	$191,338,491	249,880	$201,480,602	222,306	$195,138,907	200,096	$193,343,002

Item	Calendar year 1940		1941		1942		1943		January 1, 1944 through September 30, 1944		Total	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Farm mortgage loans:												
Federal land banks	5,692	$17,222,107	5,557	$16,976,330	4,450	$14,233,836	5,115	$15,931,013	4,004	$11,986,530	88,031	$291,333,308
Land Bank Commissioner	8,593	11,670,555	8,427	12,034,324	6,063	9,090,421	6,042	9,091,314	4,724	6,966,244	181,675	250,867,549
Total	14,285	28,892,662	13,984	29,010,654	10,513	23,324,257	11,157	25,022,327	8,728	18,952,774	269,706	542,200,857
Loans to cooperatives:												
Federal intermediate credit banks (direct)	a/	1,814,024	a/	520,220	-	-	-	-	-	-	a/	66,061,422
Banks for cooperatives (including Central Bank)	294	38,228,002	375	74,674,817	315	116,972,757	335	201,712,138	206	69,551,828	3,138	669,003,367
Agricultural Marketing Act revolving fund c/	2	2,944,420	6	3,190,100		3,317,100		1,362,000		150,000	96	65,240,351
Total	296	42,986,446	381	78,385,137	315	120,289,857	335	203,074,138	206	69,701,828	3,234	800,305,140
Short-term credit:												
Federal intermediate credit banks - loans and discounts for:												
Regional agricultural credit corporations, production credit associations, and banks for cooperatives d/	a/	132,902,142	a/	190,484,549	a/	268,032,899	a/	310,849,357	a/	194,586,356	a/	1,617,868,216
Other financing institutions	a/	49,468,170	a/	59,748,743	a/	64,772,427	a/	55,660,396	a/	31,422,088	a/	464,031,966
Production credit associations	96,104	96,865,747	99,430	121,581,662	100,754	139,862,796	104,285	150,365,791	80,203	118,213,890	1,059,295	997,582,528
Regional agricultural credit corporations e/	-	530,903	4	175,315	-	28,980	23,028	11,344,175	1,204	1,208,140	47,601	71,910,919
Emergency crop loans	107,861	11,011,585	94,021	10,319,935	92,302	11,493,385	78,085	11,127,709	67,033	11,272,445	1,443,380	140,425,405
Drought relief loans	-	-	-	-	-	-	-	-	-	-	76,123	9,256,476
Total	203,965	290,778,547	193,455	382,310,204	193,056	484,190,487	210,398	539,392,428	148,440	356,702,919	2,626,399	3,483,075,510
Net total	218,546	$229,755,513	207,820	$299,221,446	203,884	$359,771,702	221,890	$456,594,536	157,374	$250,771,165	2,899,339	$3,207,713,291

a/ Not available.
b/ Includes loans made for the period May 1, 1933 through December 31, 1933.
c/ Fiscal years 1934 through 1939 calendar years 1940 through 1944.
d/ In order to avoid duplication the amounts of these loans and discounts are excluded from the net total.
e/ Fiscal years 1934 through 1938 calendar years 1940 through 1944, Figures shown for 1939 represent 18 months period.

Note: FICB's, AMA's, PCA's and RACC's include renewals.

BANKS FOR COOPERATIVES

Volume of cotton fiber, cottonseed handling and processing, and cotton gin financing extended farmers' cooperatives and number of associations obtaining such loans

Fiscal year ended June 30, 1944

Type of activity	Number of associations to which loans were made during year	Amount loaned
Cotton fiber	29	$164,537,486.89
Cottonseed handling and processing	14	22,814,533.89
Cotton ginning	121	1,364,427.36
Total	164	$188,716,448.14

Cotton fiber, cottonseed handling and processing, and cotton gin loans outstanding, and number of cooperatives having such loans, as of October 31, 1944

Type of activity	Number of borrowers	Amount outstanding
Cotton fiber	17	$54,181,400.75
Cottonseed handling and processing	14	6,960,147.12
Cotton gin	197	2,131,006.63
Total	228	$63,272,554.50

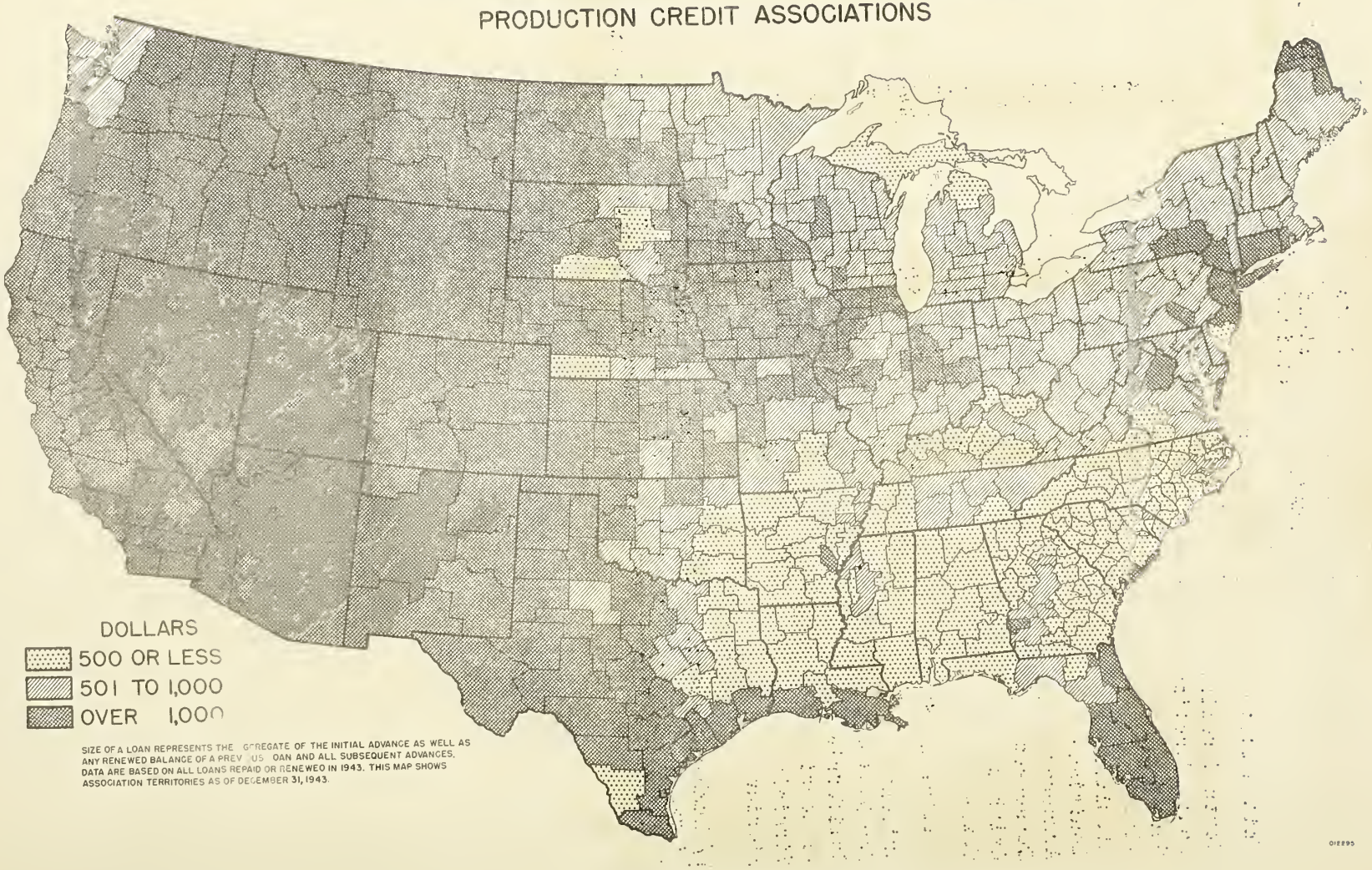
Number of PCA's, PCA field offices, and
NFLA's on Oct. 31, 1944

	PCA's			NFLA's 2/
	PCA's	Field offices 1/	Total	
United States	515	670	1,185	2,171
North Carolina	27	29	56	22
South Carolina	23	17	40	21
Georgia	33	18	51	33
Alabama	8	33	41	55
Mississippi	10	44	54	59
Louisiana	8	21	29	34
Arkansas	15	17	32	70
Tennessee	9	35	44	39
Oklahoma	14	6	20	70
Texas	36	105	141	151
Total 10 States	183	325	508	554
Arizona	2	1	3	3
New Mexico	5	-	5	29
California	25	1	26	45
Missouri	13	57	70	120
Virginia	13	11	24	89
Florida	10	4	14	12

1/ Number operating during 1944 crop season.
2/ The number of association offices is less than these figures because in many instances more than one association operates from an office.

MEDIAN SIZE OF LOANS - 1943

PRODUCTION CREDIT ASSOCIATIONS



SIZE OF A LOAN REPRESENTS THE AGGREGATE OF THE INITIAL ADVANCE AS WELL AS ANY RENEWED BALANCE OF A PREVIOUS LOAN AND ALL SUBSEQUENT ADVANCES. DATA ARE BASED ON ALL LOANS REPAID OR RENEWED IN 1943. THIS MAP SHOWS ASSOCIATION TERRITORIES AS OF DECEMBER 31, 1943.

FEDERAL LAND BANKS AND LAND BANK COMMISSIONER
Average size of loans closed during 1939, 1941, and 1943

	Federal land banks			Land Bank Commissioner		
	1939	1941	1943	1939	1941	1943
United States	$3,780	$3,860	$3,820	$1,660	$1,740	$1,770
10 principal cotton States						
North Carolina	2,180	2,450	2,410	1,250	1,420	1,550
South Carolina	2,450	2,130	2,360	1,270	1,330	1,360
Georgia	2,070	2,280	2,100	1,120	1,230	1,300
Alabama	1,920	2,300	2,370	810	950	1,060
Mississippi	4,480	3,280	3,050	1,100	1,140	1,260
Louisiana	4,260	4,660	5,090	1,410	1,500	2,020
Arkansas	4,010	3,900	4,160	1,500	1,520	1,470
Tennessee	2,410	2,500	2,460	1,340	1,460	1,620
Oklahoma	2,780	2,830	2,660	1,260	1,310	1,240
Texas	3,520	3,400	3,660	1,650	1,670	1,730
Other cotton producing States:						
Arizona	4,610	4,060	4,650	2,900	2,490	2,470
New Mexico	3,280	3,360	4,150	1,670	1,630	1,590
California	6,160	5,730	6,030	2,610	2,680	2,920
Missouri	2,960	3,030	3,120	1,440	1,570	1,590
Virginia	2,970	4,170	3,690	1,410	1,860	1,980
Florida	5,220	6,140	5,430	1,470	2,060	2,430

FEDERAL LAND BANKS AND FEDERAL FARM MORTGAGE CORPORATION

Classification of mortgage loans outstanding, September 30, 1944, for selected States

	Federal land bank			Federal Farm Mortgage Corporation 1/			Total		
	Total number of loans outstanding	Loans with all matured installments paid in full		Total number of loans outstanding	Loans with all matured installments paid in full		Total number of loans outstanding	Loans with all matured installments paid in full	
		Number	Percent		Number	Percent		Number	Percent
United States	435,374	407,223	93.5	283,064	258,247	91.2	718,438	665,470	92.6
N. C.	8,348	7,902	94.7	9,293	9,063	97.5	17,641	16,965	96.2
S. C.	5,462	5,036	92.2	6,972	6,517	93.5	12,434	11,553	92.9
Ga.	9,932	9,379	94.4	11,487	11,031	96.0	21,419	20,410	95.3
Ala.	14,479	14,198	98.1	8,322	8,145	97.9	22,801	22,343	98.0
Miss.	11,348	11,065	97.5	7,367	7,158	97.1	18,715	18,223	97.4
La.	7,390	7,230	97.8	3,544	3,449	97.3	10,934	10,679	97.7
Ark.	7,187	6,765	94.1	4,346	4,172	96.0	11,533	10,937	94.8
Tenn.	8,243	7,789	94.5	5,811	5,440	93.6	14,054	13,229	94.1
Okla.	10,708	10,121	94.5	8,748	8,201	93.8	19,456	18,322	94.2
Tex.	50,659	49,437	97.6	24,956	23,092	92.5	75,615	72,529	95.9
Total 10 States	133,756	128,922	96.4	90,846	86,268	95.0	224,602	215,190	95.8
Va.	6,871	6,330	92.1	2,796	2,566	91.8	9,667	8,896	92.0
Fla.	3,078	2,942	95.6	3,644	3,527	96.8	6,722	6,469	96.2
Mo.	10,680	10,078	94.4	8,936	8,472	94.8	19,616	18,550	94.6
Ariz.	1,502	1,370	91.2	908	818	90.1	2,410	2,188	90.8
N. Mex.	3,101	2,912	93.9	1,499	1,403	93.6	4,600	4,315	93.8
Calif.	12,030	11,436	95.1	11,890	11,167	93.9	23,920	22,603	94.5

1/ Land Bank Commissioner loans.

FEDERAL LAND BANKS AND FEDERAL FARM MORTGAGE CORPORATION
Percent of the number of loans delinquent as of September 30, 1936, 38, 40, 42, and 44, for selected States

States	Federal land banks As of September 30					Federal Farm Mortgage Corporation 1/ As of September 30					Total As of September 30				
	1936	1938	1940	1942	1944	1936	1938	1940	1942	1944	1936	1938	1940	1942	1944
United States	23.5	21.8	23.0	13.0	6.5	19.5	28.4	24.6	15.3	8.8	21.9	24.5	23.6	14.0	6.7
North Carolina	19.3	12.4	18.3	8.8	4.4	0.9	1.4	5.9	3.7	2.5	10.2	6.8	11.8	6.1	3.8
South Carolina	23.8	23.9	25.8	11.7	7.8	3.2	8.9	9.7	7.2	6.5	12.2	15.4	16.6	9.2	7.1
Georgia	27.4	20.1	24.9	11.6	5.6	3.1	3.1	8.8	6.5	4.0	14.8	11.1	16.2	8.8	4.7
Alabama	17.1	10.6	16.0	4.8	1.9	2.9	13.2	10.3	6.4	2.1	12.5	11.5	14.0	5.4	2.0
Mississippi	33.1	19.6	19.5	8.9	2.5	4.5	17.0	13.2	10.5	2.9	22.6	18.6	17.0	9.5	2.6
Louisiana	20.4	13.8	9.5	8.2	2.2	5.3	12.4	6.8	8.5	2.7	15.9	11.1	8.6	8.3	2.3
Arkansas	46.0	28.1	17.4	7.9	5.9	18.8	18.9	11.2	5.3	4.0	35.9	24.5	15.0	6.9	5.2
Tennessee	14.4	9.2	14.6	6.3	5.5	7.6	12.6	14.8	7.1	6.4	11.5	10.7	14.7	6.6	5.9
Oklahoma	26.5	21.8	16.6	9.5	5.5	23.0	29.1	17.2	10.7	6.2	24.8	25.2	16.9	10.1	5.8
Texas	26.4	25.0	22.8	15.0	2.4	23.7	33.2	28.3	18.2	7.5	25.6	27.6	24.6	16.1	4.1
Average 10 States	25.5	19.7	19.6	10.8	3.6	11.6	17.8	15.4	10.2	5.0	20.1	18.9	17.9	10.6	4.2
Virginia	11.8	8.9	16.2	10.4	7.9	8.1	15.9	21.5	10.7	8.2	12.4	11.0	17.8	10.4	8.0
Florida	24.2	21.0	34.8	14.7	4.4	8.6	9.6	20.1	8.8	3.2	18.4	14.9	26.9	11.5	3.8
Missouri	22.2	21.1	16.3	8.8	5.6	14.9	25.3	16.0	7.8	5.2	19.4	23.2	16.2	8.4	5.4
Arizona	25.6	28.3	27.6	14.5	8.8	11.0	26.6	27.5	16.1	9.9	23.1	27.7	27.6	15.1	9.2
New Mexico	23.9	22.2	14.9	9.2	6.1	19.8	22.9	16.1	10.8	6.4	25.0	22.4	15.3	9.8	6.2
California	8.1	16.3	22.7	11.5	4.9	8.1	23.4	24.4	12.7	6.1	9.5	20.0	23.6	12.1	5.5

1/ Land Bank Commissioner loans.

Estimated Farm Mortgage Debt, Jan. 1
(millions)

	1915	1925	1935	1940	1943	1944
United States	4,991	9,913	7,584	6,586	6,117	5,635
North Carolina	25	85	94	90	89	81
South Carolina	26	78	47	46	46	43
Georgia	40	127	83	82	90	86
Alabama	25	69	81	82	88	80
Mississippi	38	126	85	100	100	90
Louisiana	34	65	58	55	57	54
Arkansas	36	104	69	73	78	78
Tennessee	34	83	93	93	77	70
Oklahoma	108	236	183	154	152	142
Texas	274	519	566	432	386	346
Total 10 States	640	1,492	1,359	1,207	1,163	1,070
% of United States total	12.8	15.1	17.9	18.3	19.0	19.0
Arizona	13	33	31	29	26	25
New Mexico	11	32	27	27	24	25
California	239	493	461	408	357	347
Missouri	279	466	286	229	220	207
Virginia	36	86	75	72	68	65
Florida	12	30	41	38	34	33

Source: BAE

Percent of farm mortgage debt held by
Federal land banks and Federal Farm Mortgage Corporation[1], January 1.

States	1920[2]	1930[2]	1935	1940	1942	1943	1944
United States	3.5	12.5	33.8	41.3	38.8	37.0	33.4
North Carolina	7.5	16.3	41.9	39.9	33.4	31.2	28.2
South Carolina	8.6	23.0	64.9	57.7	47.2	46.1	42.7
Georgia	3.2	21.0	54.4	50.7	41.0	38.2	33.6
Alabama	10.6	39.9	53.1	49.1	42.0	37.5	34.0
Mississippi	10.3	42.6	55.2	41.7	37.2	33.9	31.6
Louisiana	9.6	45.7	54.5	49.2	43.4	40.1	35.6
Arkansas	9.8	24.1	37.8	36.4	28.9	24.8	22.1
Tennessee	6.7	21.4	48.0	45.2	41.2	37.9	32.8
Oklahoma	2.6	7.6	25.3	34.1	30.2	28.4	25.6
Texas	7.5	22.5	46.8	57.7	56.0	55.5	53.2
Average (10 Cotton States)	6.9	22.7	45.5	48.3	43.5	41.2	37.9
Arizona	1.9	13.9	27.1	37.9	38.5	38.4	33.2
New Mexico	10.6	25.7	43.5	43.9	45.2	41.0	33.1
California	2.5	4.8	28.0	34.2	34.2	33.4	27.3
Missouri	1.8	7.0	18.3	26.7	23.9	22.4	20.3
Virginia	10.5	31.5	53.6	48.5	42.6	38.0	32.8
Florida	12.9	12.9	52.0	47.9	50.1	50.3	42.6

1/ Land Bank Commissioner loans
2/ Federal land bank loans only. Commissioner loans first made in 1933.

Average interest rates on farm
mortgages recorded for all lenders

States	1917	1920	1933	1941 1/	1943 1/
United States	6.2	6.4	5.8	4.9	4.8
North Carolina	6.0	6.0	5.8	5.4	5.6
South Carolina	7.3	7.4	5.9	5.7	5.2
Georgia	7.2	7.3	6.7	6.0	6.1
Alabama	7.5	7.6	7.0	6.0	5.9
Mississippi	6.7	6.8	6.9	5.7	5.3
Louisiana	7.1	7.2	7.0	5.7	6.3
Arkansas	6.9	7.3	7.0	6.4	6.2
Tennessee	6.0	6.0	5.8	5.3	5.4
Oklahoma	6.6	7.1	6.4	5.1	4.8
Texas	7.6	7.6	6.2	5.0	5.3
Arizona	7.6	7.9	6.5	5.7	6.1
New Mexico	8.5	8.5	7.3	5.6	5.7
California	6.4	6.6	6.2	5.8	5.5
Missouri	6.0	6.4	6.0	5.3	5.0
Virginia	5.9	6.0	5.7	5.1	4.9
Florida	7.7	7.7	6.2	5.7	5.8

Source: BAE

1/ Average interest rates on mortgages recorded during March only.

Estimated foreclosures of mortgages, bankruptcy, etc., per 1,000 farms, years ended March 15

States	1928	1933	1938	1943	1944
United States	17.6	38.8	14.3	4.4	3.1
North Carolina	14.0	40.8	9.9	2.5	1.8
South Carolina	27.6	38.6	11.0	3.7	2.4
Georgia	23.7	34.9	9.1	2.6	1.9
Alabama	12.8	36.2	7.4	4.8	2.6
Mississippi	15.9	47.6	15.5	3.1	4.7
Louisiana	18.4	32.8	10.5	2.8	1.0
Arkansas	15.1	36.9	17.1	3.2	1.7
Tennessee	13.6	34.2	12.3	2.6	1.5
Oklahoma	21.8	44.7	14.1	4.1	2.6
Texas	9.5	30.5	12.5	2.3	1.7
Arizona	38.7	26.2	10.2	2.8	2.5
New Mexico	20.6	26.4	17.5	4.9	3.0
California	15.0	38.0	13.2	6.4	3.6
Missouri	24.1	51.2	22.6	3.0	2.7
Virginia	12.0	28.0	11.6	2.4	2.2
Florida	12.4	23.1	8.5	6.2	6.0

Source: BAE

Percent of farms operated by tenants

States	1880	1890	1900	1910	1920	1930	1935	1940
United States	26	28	35	37	38	42	42	39
North Carolina	34	34	41	42	44	49	47	44
South Carolina	50	55	61	63	64	65	62	56
Georgia	45	54	60	66	67	68	66	60
Alabama	47	49	58	60	58	65	64	59
Mississippi	44	53	62	66	66	72	70	66
Louisiana	35	44	58	55	57	67	64	59
Arkansas	31	32	45	50	51	63	60	53
Tennessee	34	31	41	41	41	46	46	40
Oklahoma	--	1	44	55	51	62	61	54
Texas	38	42	50	53	53	61	57	49
Arizona	13	8	8	9	18	16	18	12
New Mexico	8	4	9	6	12	20	19	17
California	20	18	23	21	21	18	22	19
Missouri	27	27	30	30	29	35	39	36
Virginia	30	27	31	26	26	28	30	27
Florida	31	24	26	27	25	28	28	25

Source: Census

Voluntary sales of farms per 1,000 farms
(Year ended March 15)

States	1928	1933	1935	1938	1943	1944 1/
United States	26.3	16.8	19.4	30.5	44.7	53.1
North Carolina	19.1	13.5	20.0	32.8	32.6	39.0
South Carolina	14.1	13.7	19.6	28.4	33.5	38.8
Georgia	21.3	16.2	18.6	31.5	38.2	51.3
Alabama	27.8	16.5	19.3	40.0	40.0	51.5
Mississippi	31.2	17.9	21.4	39.3	37.1	43.7
Louisiana	29.0	17.8	18.7	23.5	22.9	32.7
Arkansas	34.1	23.9	26.7	35.6	54.6	63.8
Tennessee	21.3	19.5	23.5	40.9	56.7	63.6
Oklahoma	25.0	17.6	15.2	31.5	57.1	63.0
Texas	26.3	14.8	17.1	27.9	41.0	49.1
Arizona	39.3	18.2	20.0	30.1	39.5	45.1
New Mexico	35.9	19.2	19.6	33.0	35.9	47.5
California	32.3	21.4	23.5	42.0	57.6	65.0
Missouri	27.7	20.0	22.6	31.6	59.5	68.6
Virginia	17.3	14.6	16.8	28.1	32.0	41.2
Florida	31.7	22.3	23.8	28.0	33.2	42.0

Source: BAE

1/ Preliminary

Index of Farm Real Estate Values, March 1
1912-14 = 100

States	1915	1920	1933	1940	1943	1944
United States	103	170	73	84	99	114
North Carolina	102	223	86	138	161	193
South Carolina	94	230	57	89	112	136
Georgia	94	217	57	82	103	120
Alabama	98	177	88	122	139	160
Mississippi	97	218	73	106	133	145
Louisiana	95	198	89	121	145	154
Arkansas	95	222	80	95	123	141
Tennessee	100	200	79	108	139	160
Oklahoma	95	166	76	93	111	120
Texas	103	174	83	99	109	124
Arizona	97	165	90	95	110	127
New Mexico	100	144	75	84	101	117
California	111	167	109	121	141	168
Missouri	102	167	55	59	74	82
Virginia	97	189	88	112	131	146
Florida	97	178	121	133	150	161

Source: BAE

Indexes of average farm real estate sales prices per acre during the first half of 1943 and the first half of 1944
1942 = 100

Area Number 1/	Area location	Indexes	
		First half 1943	First half 1944
	North Carolina:		
21	Mountain	134	139
22	Piedmont	100	149
23	Eastern	109	146
	South Carolina:		
24	Piedmont	104	146
25	Eastern and Southern	99	117
	Georgia:		
26	Northern	111	134
27	Central	124	122
28	Southern	96	127
	Alabama:		
47	Northern	127	143
48	Central	105	144
49	Southern	107	120
	Mississippi:		
50	Delta	95	119
51	Brown Loam	134	140
52	Northeastern	125	130
53	Southeastern	102	130
	Louisiana:		
54	Northwestern	100	115
55	Northeastern	104	121
56	Eastern	118	165
57	Southern	104	121
	Arkansas:		
69	Northwestern	115	124
70	Southwestern	111	120
71	Eastern	118	127
	Tennessee:		
42	Western	97	127
43	West Central	109	122
44	Central	116	118
45	East Central	114	151
46	Eastern	93	135
	Oklahoma:		
113	Panhandle	115	133
114	North Central Wheat	114	123
115	Northeastern	104	123
116	Southeastern	98	113
117	Southwestern	107	118

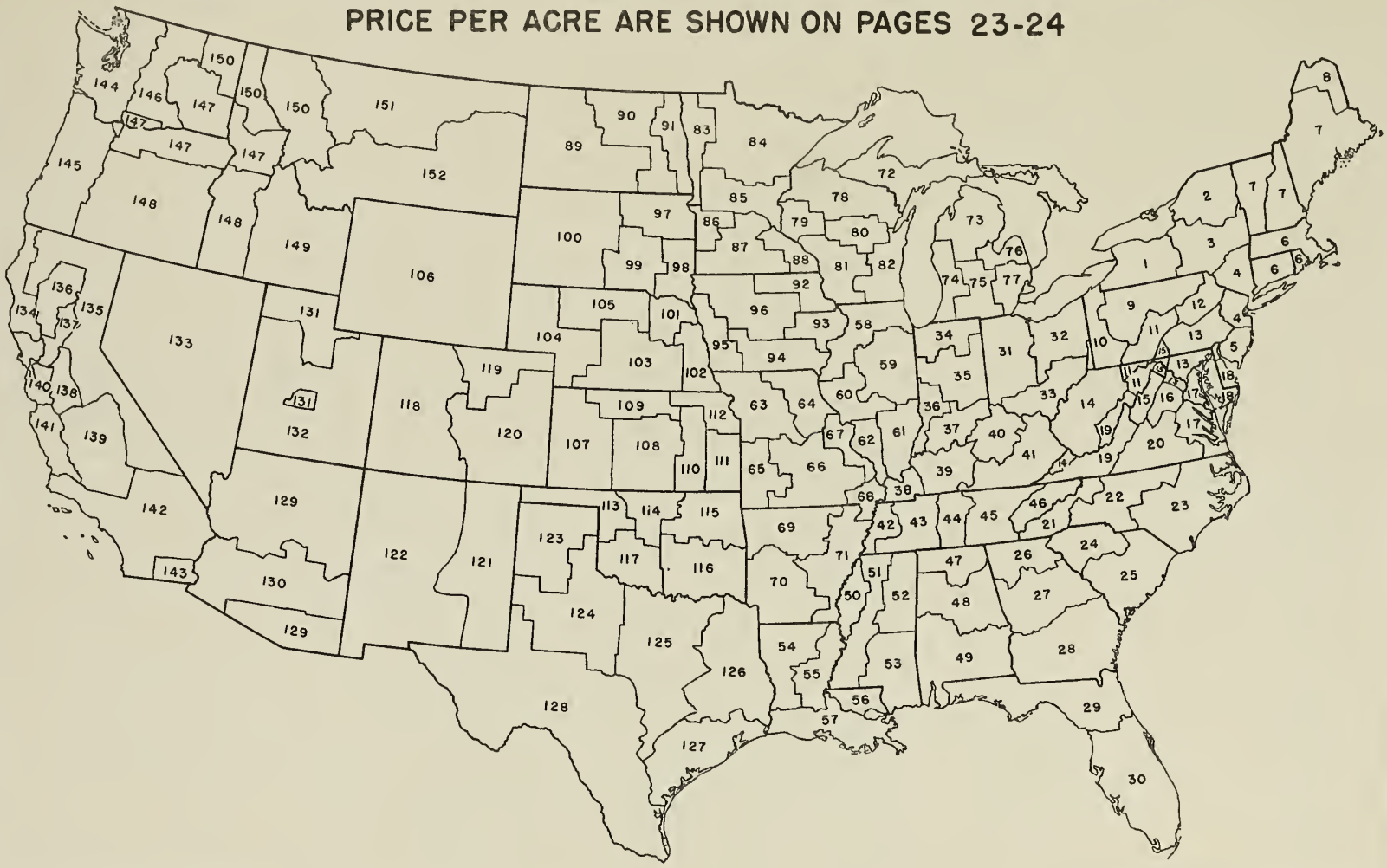
1/ See map page 25.

Indexes of average farm real estate sales prices per acre during the first half of 1943 and the first half of 1944
1942 = 100 - Continued

Area Number	Area location	Indexes	
		First half 1943	First half 1944
	Texas:		
123	Panhandle Wheat	115	146
124	Northwestern Cotton and Grain Sorghum	108	124
125	Central Cotton and Feed	113	143
126	Eastern Sandy Land	105	122
127	Coastal	110	140
128	Livestock Grazing	106	125
	Arizona:		
129	Northern and Southern	(b)	(b)
130	Central	115	120
	New Mexico:		
121	Eastern	120	130
122	Western	(b)	120
	California:		
134	Cascade Mountain	(b)	(b)
135	Sierra Nevada Range	143	145
136	North Central	108	114
137	Northern Valley	120	116
138	Central Valley	117	143
139	Southern Valley	102	133
140	San Francisco Bay	148	122
141	Salinas River Valley	98	133
142	Southern	113	152
143	Imperial Valley	112	130
	Missouri:		
63	Northwestern	118	127
64	Northeastern	113	129
65	Southwestern	115	118
66	South Central	116	126
67	East Central	111	123
68	Southeastern	115	130
	Virginia:		
16	Northern Virginia	119	(b)
17	Eastern Virginia and Southern Maryland	116	(b)
18	Eastern Shore	101	(b)
19	Appalachian Region of Virginia	111	(b)
20	South Central Virginia	119	(b)
	Florida:		
29	Northern and Western	108	121
30	Central and Southern	128	155

(b) Inadequate data.
FCA - Economic and Credit Research Division.

AREAS, DESIGNATED BY NUMBER, FOR WHICH INDEXES OF AVERAGE PRICE PER ACRE ARE SHOWN ON PAGES 23-24



UNITED STATES DEPARTMENT OF AGRICULTURE

FARM CREDIT ADMINISTRATION
ECONOMIC AND CREDIT RESEARCH DIVISION 013932-1

UNITED STATES DEPARTMENT OF AGRICULTURE
War Food Administration

(Material for presentation to the Special Committee of the House Committee on Agriculture on Post-War Farm Programs - Hearings on December 4, 1944))

CCC COTTON LOAN, PURCHASE AND EXPORT PROGRAM

By C. C. Smith, Director, Cotton Division, Commodity Credit Corporation

Commodity Credit Corporation was incorporated October 16, 1933, pursuant to an executive order. In January 1935 the Corporation was recognized by the Congress as an Agency of the United States, and has been authorized from time to time to continue as an agency of the United States until the close of business June 30, 1945.

The Corporation was organized to perform such functions as were necessary to effectively and efficiently carry out the provisions of various recovery acts, principally the Agricultural Adjustment Act approved May 12, 1933. With the passage of the Agricultural Adjustment Act of 1938, loans by Commodity Credit Corporation on the basic commodities have been made pursuant to the directions contained in said Act. The Act of July 1, 1941, commonly referred to as the Steagall Amendment, directed that loans be made available on nonbasic agricultural commodities where necessary to encourage the expansion of production of such commodities. Nonbasic commodities are any commodities other than the basic crops of cotton, corn, wheat, tobacco, peanuts, and rice. The Corporation carries out its functions through purchase or loan programs on commodities.

The loan program on cotton is designed to promote orderly marketing of the crop. Producers on the average sell the following percentage of their crop each month: August 4.6 percent, September 16.9 percent, October 27.0 percent, November 20.9 percent, December 10.9 percent, January 4.7 percent, February 3.3 percent, March 3.5 percent, April 2.5 percent, May 1.8 percent, June 1.9 percent, July 2.0 percent. The heavy marketing of the crop from September through December can depress the market to producers during their active market period. The loan program permits the farmer to carry his crop at a reasonable cost until later months when the weight of the movement has passed and thereby promote orderly marketing.

Cotton yields per acre are subject to large fluctuations due to weather, insects, or other factors beyond the farmers' control. A large yield per acre due to good weather frequently causes a depressed price during the marketing season. The cotton yield per acre has fluctuated during the past 15 years from 157# in 1930 to an indicated yield of 293# in 1944. The loan provides protection against a drastic decline in price due to conditions over which the producer has no control.

The loan likewise enables the producer and his credit agency, such as the bank or other financing organization, to make plans for the crop based upon a minimum guaranteed price. This prevents violent fluctuations in prices which are injurious to the producer, credit agencies, and other business in the cotton area.

During the war period it has been necessary to stress the production of certain types of cotton. The demand for uniform cloth and similar material created a greatly increased demand for cotton with a staple length of 1 1/8 inch and longer. When Rommel was about to capture Egypt, it was necessary to increase the production of SxP from 32,325 bales in 1940 to 59,617 bales in 1943. It was also necessary to secure some of the longer and stronger Sea Island cotton for the Navy's dirigible program. All of these requirements were met by adjusting the loan or purchase price of the required cotton to insure maximum production of the needed cotton.

The first cotton loan of the Corporation was made on 1933 crop cotton. This loan was based on a flat rate of 10 cents per pound compared with a July 15th 1933 parity price of 14.51 cents per pound, or 68.9 percent of parity. The loan was continued on the basis of a flat rate in cents per pound for principal qualities of cotton until the 1938-39 loan program when a schedule of premiums and discounts were announced which reflected approximate market value. Location differentials were inaugurated in the 1939-40 loan program. The value of cotton for spinning purposes varies with the grade and staple. The value also varies with the location of the cotton in regard to the proximity to the mill where the cotton is consumed or to ports when there are active export markets. The loan program now covers all commercial qualities of cotton quoted on the 10 spot markets. The loan values are based on the spot market quotations for premiums and discounts and on location as related to the principal censuming area known as the Group B mill area.

The program is financed through lending agencies, principally banks, or cooperative associations, and direct loans by the Corporation. the Producer pays 3 percent interest for the loan with the warehouse receipts as collateral. The lending agency advances the funds and receives 1 1/2 percent interest, and the Corporation receives 1 1/2 percent interest. The Corporation offers to purchase the entire loan at any time thereby in effect providing the lending agency with a call loan bearing 1 1/2 percent interest for their participation in the program.

The producers who placed their cotton in the loan have generally shown a profit each year with the exception of the 1934 and 1937 crops. The margin of profit was small on the 1935 crop. The largest margin of profit was in the 1939, 1940, and 1941 crops.

The farm price of cotton dropped from 38.5 cents per pound in April 1920 to 9.5 cents in April 1921. This violent price fluctuation caused disaster to

southern farmers and to business in the South. Many farmers were forced to place long term mortgages at high interest rates on their land thereby incurring high fixed charges for a ten to twenty year period. The loan provides price protection to cotton farmers against such drastic price fluctuations.

The loan rate for cooperators has been fixed by the Congress at the following rates. The AAA Act of 1938 as amended fixed the rate at "not less than 52 per centum and not more than 75 per centum of the parity price of cotton as of the beginning of the marketing year." The Act of May 26, 1941, fixed the "rate of 85 per centum of the parity price for the commodity as of the beginning of the marketing year." The Stabilization Act of 1942 as amended provided for loans "at the rate of 90 per centum of the parity price". This was later amended to read "at the rate in the case of cotton of 92½ per centum - - - of the parity price for the commodity as of the beginning of the marketing year." The Surplus Property Disposal Act provides for an increase in the loan rate "at the rate in the case of cotton of 95 per centum. The amendment made by this section shall be applicable only with respect to crops harvested after December 31, 1943, but shall not apply to crops planted after 1944."

Loans on cotton for the 1945 crop will be available under the present law at 92½ percent of parity. Loans will be available at this rate until "the expiration of the two year period beginning with the first day of January immediately following the date upon which the President by proclamation or the Congress by concurrent resolution declares that hostilities in the present war have terminated, if producers have not disapproved marketing quotas for such commodity for the marketing year beginning in the calendar year in which such crop is harvested."

The Corporation has made loans on 29,341,000 bales of cotton up to October 31, 1944. The producers have redeemed 18,341,000 bales. The Corporation acquired title to 6,923,000 bales of which 4,698,000 bales have been sold. The producers still hold 4,077,000 bales under loan or in a pool.

When consideration is given to future price support programs at least two views must be considered. (1) If an adjustment period is expected after this war as after the last war when the farm price of cotton fell in 12 months from 38.5 cents per pound to 9.5 cents per pound, the producer should have price protection against such drastic price fluctuations. (2) The world price of cotton is lower than the American price of cotton and tends to limit exports. The synthetic fibers and substitute materials offer keen competition for cotton in the domestic market. If markets are thus limited, the cotton producers' market is likewise limited. The problem is to devise a program which will cover those opposite viewpoints as to cotton prices.

The 1944 Cotton Purchase Program:

The Stabilization Act of 1942 as amended (passed June 30, 1944) provided that "The President, acting through any Department, Agency, or office of the Government, shall take all lawful action to assure that the farm producer of any of the basic agricultural commodities (cotton, etc.) - - - receives not less than the higher of the two prices specified in clauses (1) and (2) of this section." Parity was the higher of these prices. Cotton had not reached parity after the announcement of various steps, such as the 1944 cotton loan program, and adjustments in textile price ceilings. The estimate of the 1944 crop proved larger than expected. A purchase program was announced for cotton on September 24, 1944. The CCC offered to purchase cotton at a sliding scale of rates on the average for Middling 15/16 inch cotton ranging from 21.90 in October 1944 to 22.25 cents per pound in May 1945 and averaging about parity. The tight warehouse and labor situation made it impossible to store all cotton as ginned and the increasing scale of purchase rates was devised to compensate the producer who could not get his cotton in a warehouse until a later date. The cotton is being purchased on gross weight. Banks, cooperatives, and others, acting as lending agencies under the loan program were asked to quality as purchasing agencies, as well as other qualified purchasing agencies. The purchasing agency is paid 50 cents per bale for its services plus reimbursement of cash or a Treasury guaranteed 1 percent note. The provisions for sampling, warehousing, and handling the cotton closely parallel the loan program. Cotton is only purchased from producers and is eligible to be purchased until June 30, 1945, the end of the present law.

Cotton merchants can purchase cotton in a normal manner at the levels of the purchase program and sell this cotton to mills at the price levels allowed mills for cotton in their price ceilings.

EXPORT PROGRAM

Domestic cotton prices are higher than the world level of cotton prices. While exports are limited under war conditions if American cotton is to compete with foreign growths it is evident that American cotton must sell at competitive prices in the export markets of the world. The Congress recognized this fact and made the following provisions in the Surplus Property Act. "(c) Surplus farm commodities shall not be sold in the United States under this Act in quantities in excess of, or at prices less than, those applicable with respect to sales of such commodities by the Commodity Credit Corporation, or at less than current prevailing market prices, whichever may be the higher, unless such commodities are being disposed of, pursuant to this Act, only for export; and the Commodity Credit Corporation may dispose of or cause to be disposed of for cash or its equivalent in goods or for adequately secured credit, for export only, and at competitive world prices, any farm commodity or product thereof without regard to restrictions with

respect to the disposal of commodities imposed upon it by any law: Provided, That no food or food product shall be sold or otherwise disposed of under this subsection for export (1) if there is a shortage of such food or food product in the United States or if such sale or other disposition may result in such a shortage, or (2) if such food or food product is needed to supply the normal demands of consumers in the United States."

Immediately prior to the announcement of the Export differential of 4 cents per pound, Brazilian Type 4 cotton was selling for 17.82 cents per pound, net weight, export tax paid f.o.b. the port of Santos. Type 5 was 17.14 cents per pound. Old crop Indian cotton about equal to Strict Middling 7/8 inch Middling American was selling for 14.92 cents per pound, net weight, f.o.b, India. Old crop Indian cotton equivalent to Strict Low Middling 13/16 inch, net weight, was selling for 10.83 cents per pound f.o.b. India. Prices of various growths were checked and it was determined that an export differential of 4 cents per pound should place American cotton on a competitive basis.

As the war progresses, export markets will develop and American cotton should have an equal chance to sell in the export markets of the world. It is obviously in the best interests of American cotton producers that cotton be sold at the best level possible and at the same time compete with other fibers in the world market.

Under the Export Program cotton will be made available by the Commodity Credit Corporation to exporters at competitive world prices to be announced from time to time by the CCC.

All practicable steps will be taken to encourage the exportation of the qualities of cotton of which the greatest surpluses exist, and to protect domestic supplies of those qualities of cotton which are found to be in relatively short supply. For the time being Good Middling rain-grown cotton 15/16 inch and longer will not be offered for export under the program.

The procedure in general is that Commodity Credit Corporation will announce the prices at which it will sell cotton for export. Upon registration of export sales with the CCC the Corporation will (1) supply the cotton at the designated export price, or (2) authorize the exporter to purchase cotton in the domestic market at the domestic price, and then receive from the Corporation the announced differential between domestic prices and the announced export price.

Exporters of cotton, will be required to furnish satisfactory evidence of exportation and to furnish bonds to cover their liability to Commodity Credit Corporation. Exporters will be required to report existing contracts to export cotton and will not be permitted to cancel these contracts and replace such contracts with new contracts under the terms of the program.

The export price of Middling 15/16 inch cotton will be the average price on the 10 spot markets for Middling 15/16 inch on the day that CCC is notified of the export sale plus 60 points to convert the price to a Group B warehouse location, less the announced export differential. The location differential will be the location differential applicable under the 1944 Cotton Loan Program. The premiums and discounts on tenderable qualities will be the average of the 10 spot markets on the date the CCC receives notice of the export sale. The premiums or discounts on nontenderable qualities will be those announced from time to time.

There is currently a shortage of cotton textiles in the United States. A program covering the export of cotton textiles, and covering import programs as well, is being developed in cooperation with exporters and trade organizations. This program will be announced later when a surplus of cotton textiles may be available for export. A program to cover cotton waste also will be announced later.

COTTON LOANS

Year	Production (1000 running Bales)	Pledged 1000 (Bales)	Face Amount of loans (1000 dollars)	Loan Rate 3/ (cents per lb.)	Redeemed By Producers (1000 Bales)	Held by Producers 2/ (1000 Bales	Acquired by CCC (1000 Bales)	Held by CCC 2/ (1000 Bales)
1933-34	12,664	1,926	99,498	10.00	1,926	-	-	-
1934-35	9,472	4,632	282,644	12.00	2,967	-	1,665	668
1935-36	10,420	115	5,777	10.00	115	-	-	-
1936-37	12,141	No	Loan	-	-	-	-	-
1937-38	18,252	5,581	243,275	9.00	325	-	5,256	1,565
1938-39	11,623	4,482	205,329	8.30	4,482	-	-	-
1939-40	11,481	30	1,324	8.70	30	-	-	-
1940-41	12,298	3,180	153,140	8.90	3,180	-	-	-
1941-42	10,49[illegible]	2,221	153,617	14.02	1,948	273 6/	-	-
1942-43	12,438	3,143	264,661	17.02 4/	1,855	1,286 6/	2	2
1943-44	11,129	3,595	342,100	18.41	1,512	2,083	-	-
1944-45	11,928 1/	436 2/	47,180 2/	20.03 5/	1 2/	435	-	-
Total	144,321	29,341	1,798,545	-	18,341	4,077	6,923	2,235

1/ Estimate based on November 8 cotton production. 2/ Report as of October 31, 1944. 3/ Basic loan rate on Middling 7/8 inch cotton, gross weight. 4/ Based on 90% of parity. 5/ Based on 95% of parity. 6/ Pooled for producers account.

Loans have been made on approximately 29.3 million bales of cotton from the 1933 to 1944 (through October 31, 1944) crops in the amount of about 1.8 billion dollars. The average loan rate, by years, for Middling 7/8 inch cotton, gross weight, during this period has varied from a low of 8.30 cents per pound in 1938 to a high of 20.03 cents per pound in 1944. Farmers have redeemed loans on approximately 18.3 million bales, and the Corporation has taken title to about 6.9 million bales — practically all from the 1934 and 1937 crops. About 1.6 million bales have been pooled and will be sold, and the net proceeds, if any, will be distributed to the producers in proportion to their interest in the pool.

Disposition of cotton acquired has been as follows: 600 thousand bales to Great Britain for rubber in the barter deal; 2.0 million bales supplied under lend-lease arrangements, largely to Great Britain; 1.4 million bales under the 1942 and 1943 general sales programs; 400 thousand under the export program, largely to Canada; 200 thousand bales under the new uses program; and about 100 thousand bales for other purposes.

AMOUNT OF COTTON REDEEMED BY PRODUCERS DURING YEAR
ENDING JULY 31, BY COMMITMENTS, BY YEARS
(1000 Bales)

Commitment (Year)	Repaid	Amount Repaid During Year Ending July 31, by Years											
		1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/
1933	1,926	831	1,095	-	-	-	-	-	-	-	-	-	-
1934	2,967	-	179	1,293	1,491	1	3	-	-	-	-	-	-
1935	115	-	-	37	78	-	-	-	-	-	-	-	-
1936	No Loan		-	-	-	-	-	-	-	-	-	-	-
1937	325	-	-	-	-	284	25	16	-	-	-	-	-
1938	4,482	-	-	-	-	-	369	2,044	1,819	239	11	-	-
1939	30	-	-	-	-	-	-	9	19	2	2/	-	-
1940	3,180	-	-	-	-	-	-	-	3,078	99	3	-	-
1941	1,948	-	-	-	-	-	-	-	-	1,250	372	326	-
1942	1,855	-	-	-	-	-	-	-	-	-	861	775	219
1943	1,512	-	-	-	-	-	-	-	-	-	-	1,212	300
1944	1	-	-	-	-	-	-	-	-	-	-	-	1
Total	18,341	831	1,274	1,330	1,569	285	397	2,069	4,916	1,590	1,247	2,313	520

1/ Report as of October 31, 1944.
2/ Less than 500 bales.

UNITED STATES DEPARTMENT OF AGRICULTURE
War Food Administration

(Material for presentation to the Special Committee of the House Committee on Agriculture on Post-War Farm Programs - Hearings on December 4, 1944)

STATEMENT ON FATS AND OILS

By W. H. Jasspon, Director, Oilseeds Division,
Commodity Credit Corporation

Cottonseed is one of the major domestic sources of our edible vegetable oil supply. Attached are tabulations showing the average production of cottonseed oil for the pre-war period 1935-1939, and the production for each of the calendar years 1942 to 1944, inclusive. Similar data are shown for soybean, peanut, and corn oil.

There are also attached tabulations showing the consumption, importation, and exportation of certain other oils, as well as for lard.

Due to military and export requirements of edible oils and fats, it continues to be necessary to restrict total domestic civilian consumption of edible oil to 88 percent of the average use during the calendar years 1940 and 1941. Except for small quantities allocated for specialized uses, consumption of edible liquid oils is restricted to edible channels.

Under WFO-29 cottonseed, peanut, soybean and corn oils are allocated each calendar year quarter to refiners, non-refining shortening manufacturers, and margarine manufacturers for their production of food products. These allocations include their civilian quotas plus requirements for the military, Lend-Lease, commercial exports and for specialized industrial purposes.

A policy of equitable distribution of the oils available is observed in this allocation by taking into account the requests for each kind of oil desired by the user, compared the total available supply of that particular oil, and the manufacturer's total edible oils quota.

To prevent maldistribution within the industry, specific authorization is required to deliver and to receive refined cottonseed, peanut, soybean or corn oil. Under a partial suspension of the order, no authorization is now required for the producer mills to deliver these crude oils to any specific refiner or for the refiner to accept any particular delivery. However, specific authorization is required where the producer mills deliver these crude oils to industrial users.

The support price programs now in effect are:

Cottonseed:

Minimum prices paid by processing mills for cottonseed have been established during the current and for the two preceding crop years. These prices are related to the Office of Price Administration ceiling prices for cottonseed products. For 1944, the price of cottonseed is supported by an open offer made by the Commodity Credit Corporation to cottonseed oil mills. Mills accepting this open offer agree to pay at least the following prices for basic grade (100) cottonseed in lots of 5 tons or more f.o.b. shipping point:

(a) $55.00 per ton in Oklahoma, Texas (except Bowie County) and New Mexico.

(b) $56.00 per ton in other states and Bowie County, Texas. Premiums and discounts are specified for cottonseed above or below basic grade.

Commodity Credit Corporation agrees to purchase cottonseed oil and meal or cake from processors accepting the offer at specified prices. The Corporation agrees also to purchase a minimum quantity of cotton linters of chemical grade quality produced by such mills at the applicable OPA ceiling price.

Soybeans:

Prices to farmers for soybeans are supported through loans to producers, purchases by Commodity Credit Corporation through elevator operators and committees, and contracts with soybean processors. For 1944 the base support price is $2.04 per bushel for green and yellow soybeans, and $1.84 for brown, black or mixed soybeans grading No. 2 or better with 14 percent moisture content when delivered to country elevators or other normal producer delivery points. Premiums are provided for low moisture content down to 11 percent, and discounts are established for lower grades. Under its processor contracts Commodity Credit Corporation purchases soybeans from the processor at the base support prices specified above, and resells them to processors for crushing at varying prices based upon the oil and meal outturn values at the plant location, type of equipment used, size of plant, and the oil content of the soybeans as determined by chemical analysis.

Peanuts:

The prices for farmer' stock Spanish peanuts having a sound mature kernel content of 70 percent and farmers' stock Virginia and Valencia peanuts having a sound mature kernel content of 65 percent are

supported at $160.00 per ton. Prices for farmers' stock Runner peanuts having a sound mature kernel content of 65 percent are supported at $145.00 per ton. Premiums and discounts are established for variations in sound mature kernel content and quality. These prices are supported through contracts with shellers, crushers, seed dealers, and farmer-cooperatives who purchase, at not less than the minimum support prices, all peanuts for the account of Commodity Credit Corporation. The contracts with shellers and crushers provide that Commodity Credit Corporation will sell the peanuts purchased to the contractor for processing at prices which are related to the applicable OPA ceilings. Under these contracts the Corporation agrees to repurchase farmers' stock peanuts from the sheller, and at the option of the Corporation, to repurchase either farmers' stock peanuts or peanut oil and cake from the crusher. Such repurchases are made at the prices specified in the contracts.

Corn Oil:

Corn oil is a by-product resulting from certain corn processing industrial operations. It has not been deemed necessary to enter into any underwriting operations with respect to the production of corn oil.

Actual farm prices for cottonseed, peanuts, soybeans, and flaxseed as a percentage of parity, or comparable prices, on October 15, 1944, were:

Cottonseed	138
Peanuts, for nuts	94
Peanuts, for oil	193
Flaxseed	101
Soybeans	125

The October fats and oil situation published by the Bureau of Agricultural Economics, U. S. Department of Agriculture, states:

"World Demand to Increase with Resumption of European Imports

The principal new factor in world demand for fats and oils is the renewal of import demand by the countries of continental Europe. This will more than offset any reduction in Russian requirements resulting from recovery of the Ukraine and other oilseed-producing regions. Pre-war imports of fats and oils into continental Europe, exclusive of Russia, averaged about 4.5 billion pounds annually (including whale oil and the oil content of oil-bearing materials), of which approximately 2 billion pounds went to France, Belgium, Holland, and Italy.

"Peak demand for fats and oils to be supplied from the United States may be reached in 1945. By 1946 world supplies may be materially increased by exports from the Far East, by expanded production of whale oil, and by greater availability of supplies in South America.

"The post-war outlook for fats and oils produced in the United States includes the probability of a continued upward trend in domestic civilian consumption. Over the decade from the late 1920's to the late 1930's there was an increase of 1.3 billion pounds in the annual disappearance of fats and oils in the United States. If economic activity is at a fairly high level in the late 1940's, domestic disappearance of fats and oils may increase another 1 to 1.5 billion pounds over 1939 to 10.5 or 11 billion pounds at prices somewhat higher than in 1939."

In the period 1935-39 the United States consumed 6 1/4 billion pounds of fats and oils as food annually. Nearly 60 percent of the total consisted of butter and lard. The balance of over 2.6 billion pounds consisted mainly of edible oils in the form of manufactured shortening, margarine, salad spreads, and cooking and salad oils. Of this quantity approximately 560 million pounds, or 21 percent, consisted of imported oils. Because of the sharp reduction in imports since 1941, the use of imported oils in food products has practically disappeared. Such imported oils and fats as we are now receiving are going almost exclusively into essential non-food products. This has meant that we have had to expand domestic production of edible oilseeds, mainly soybeans, to make up the deficit in edible oil supplies. In addition, our total consumption of food fats, including both civilian and military use, has been moderately increased. Moreover, demand for exports of food fats and oils to our Allies has mounted sharply since 1941. This year alone we shall have exported about 1.3 billion pounds of food fats and oils under Lend-Lease. Fortunately, we have had a record output of lard, and more than half of our total Lend-Lease shipments of food fats and oils this year will consist of lard. It has been possible also to ship fairly sizable quantities of linseed oil to Russia for use there as a food oil. In the post-war period, when export and military demands for food fats and oils will taper off and imports are resumed, there may need to be some reduction in our output of soybeans and flaxseed. But civilian consumption of food fats, unhampered by restrictions necessary in wartime, should expand.

The post-war values of most cottonseed products are inevitably related to the supply and demand for similar competing or interchangeable commodities. The post-war value of cottonseed will be affected not only by any changes in market prices of edible oils and protein feeds as groups, but by the additional factor of linter values. As a result of war demand for munitions, and increased industrial consumption in such widely separated fields as rayon and plastics, cotton linters have netted a greater return than can be hoped for in the post-war period, when wood pulp prices and adequate supplies of linters will become important market factors. At this time at least 80 percent of the total linters production is assigned by the War Production Board for the production of chemical pulp.

Recognizing the importance of income from cottonseed to the South, serious consideration should continue to be given to the maintenance of increased

consumption of all vegetable oilseeds products. Sound and comprehensive research programs will be most helpful in achieving this objective.

The wartime policy of the Government has been directed to meeting domestic as well as wartime prospective requirements for relief by continued large scale production, rather than by reserving large stock piles of products. This policy has made a larger proportion of total supplies available for current use. It also removes the market hazard inherent in accumulated inventories and its possible adverse effect on prices of subsequent crops.

For 1945, prospective supplies of oil and fats will meet a ready demand. Large quantities of protein will be required to reestablish European livestock economy. No one can now accurately forecast the time when vegetable oil production will be restored in certain world areas to a prewar scale. Another price-making influence will be the rate of lard production in the post-war period. It is possible that a surplus may accumulate again, as it did prior to the beginning of the war in 1939, if and when European livestock production is restored. Production of lard and oilseeds is also being increased in other areas, notably South America.

If a larger proportion of our hog production were of bacon-type hogs, as is the case in Denmark and Canada, less lard would be produced. Such a change in production would be of interest to the hog farmer as well as the producer of oilseeds crops.

Fundamentally, however, we must strive to maintain a high level of domestic industrial activity so as to provide maximum employment. Adequate price levels to producers can be sustained by large scale buying power. It is the key to a sound and prosperous economy.

Attachements-3

TABLE 1

SPECIFIED EDIBLE FATS AND OILS

PRODUCTION, IMPORTS, EXPORTS, DISAPPEARANCE AND STOCKS - PRE-WAR AVERAGE 1935-39 AND 1942, 1943 AND ESTIMATED FOR CALENDAR YEAR 1944

(in thousands of pounds)

	1935	1936	1937	1938	1939	1935-39 Average	1942	1943	Estimated 1944
Cottonseed oil (Crude Basis)									
Stocks January 1	649,196	565,320	606,042	685,598	783,324	657,896	508,596	481,209	440,834
Production	1,184,039	1,247,298	1,626,215	1,677,673	1,389,792	1,425,003	1,385,867	1,312,531	1,223,300
Imports	177,081	136,310	207,050	83,329	31,617	127,077	9,046	13,115	-
Total Available	2,010,316	1,948,928	2,439,307	2,446,600	2,204,733	2,209,976	1,903,509	1,806,855	1,664,134
Stocks December 31	565,320	606,042	685,598	783,324	777,179	683,492	481,209	440,834	542,200
Total Disappearance	1,444,996	1,342,886	1,753,709	1,663,276	1,427,554	1,526,484	1,422,300	1,366,021	1,121,934
Exports	4,090	3,149	7,591	4,872	13,646	6,670	21,351	51,864	5,000
Domestic Disappearance	1,440,906	1,339,737	1,746,118	1,658,404	1,413,908	1,519,814	1,400,949	1,314,156	1,116,934
Peanut oil (Crude Basis)									
Stocks January 1	27,160	30,321	29,215	24,698	27,557	27,790	43,608	27,008	54,500
Production	44,673	70,214	50,756	78,152	73,138	63,387	76,829	149,621	109,700
Imports	80,723	49,006	57,999	15,553	3,779	41,412	439	9	-
Total Available	152,556	149,541	137,970	118,403	104,474	132,589	120,876	176,638	164,200
Stocks December 31	30,321	29,215	24,698	27,557	21,266	26,611	27,008	54,500	38,000
Total Disappearance	122,235	120,326	113,272	90,846	83,208	105,978	93,868	122,138	126,200
Exports	-	-	4,744	-	325	1,014	727	791	500
Domestic Disappearance	122,235	120,326	108,528	90,845	82,884	104,964	93,141	121,347	125,700
Soybean oil (Crude Basis)									
Stocks January 1	19,008	31,090	34,417	62,317	76,710	44,708	113,020	144,139	186,566
Production	105,056	225,297	194,411	323,343	457,550	261,131	761,582	1,233,751	1,237,500
Imports	14,249	7,187	29,752	4,258	4,126	11,914	-	-	-
Total Available	138,313	263,574	258,580	389,918	538,386	317,753	874,602	1,377,890	1,424,066
Stocks December 31	31,090	34,417	62,317	76,710	71,562	55,219	144,139	186,566	156,500
Total Disappearance	107,223	229,157	196,263	313,208	466,824	262,534	730,463	1,191,324	1,267,566
Exports	4,111	3,954	5,748	6,412	12,111	6,467	19,428	57,929	125,000
Domestic Disappearance	103,112	225,203	190,515	306,796	454,713	256,067	711,035	1,133,395	1,142,566
Corn oil (Crude Basis)									
Stocks January 1	27,991	21,202	25,507	18,471	27,978	24,230	51,547	34,418	26,039
Production	99,788	127,171	127,466	136,729	150,555	128,342	247,648	238,600	213,400
Imports	25,746	28,672	32,926	22,242	13,965	24,710	1,448	889	-
Total Available	153,525	177,045	185,899	177,442	192,498	177,282	300,643	273,907	239,439
Stocks December 31	21,202	25,507	18,471	27,978	34,849	25,601	34,418	26,039	23,300
Total Disappearance	132,323	151,538	167,428	149,464	157,649	151,681	266,225	247,868	216,139
Exports	833	929	444	113	180	500	2,844	8,484	250
Domestic Disappearance	131,490	150,609	166,984	149,351	157,469	151,181	263,381	239,384	215,889

UNITED STATES DEPARTMENT OF AGRICULTURE
War Food Administration

(Material for presentation to the Special Committee of the House Committee on Agriculture on Post-War Farm Programs - Hearings on December 4, 1944)

WORK OF THE COOPERATIVE AGRICULTURAL EXTENSION SERVICE IN COTTON PRODUCTION, MARKETING, AND USE

By M. L. Wilson, Director of Extension Work

In 1,300 counties of the cotton-growing South there are more than 4,000 Cooperative Extension Service workers--county agents, home demonstration agents, cotton specialists, and other specialists and supervisors. Their programs are planned locally with farm people and naturally revolve largely around the problems of the cotton farmer.

It was largely the threat of the cotton-boll weevil that brought the Cooperative Extension Service into being as an educational agency. The job of the Extension Service ever since has been to take to farm people the best information and advice scientific research can give, and to demonstrate and explain its local practical application.

Coordinated Educational Service

The Extension Service brings together the best information on all phases of cotton production, marketing, and use from Federal, State, and local agencies into one coordinated educational service. Only through mass understanding and application of scientific methods have cotton farmers been able to survive the threat of the boll weevil. Likewise, much of the other progress that has been made, such as doubling the yield of cotton per acre in the last 15 years, would have been impossible without such educational work.

Extension work with the cotton farmer begins in the early planning stages when county agents and local farm advisory committees sit down to work out sound local land-use and farm-management practices. From there on, farmers must be kept apprised of the best possible information on all phases of production, harvesting, handling, and marketing of the crop.

The problems and possibilities of cotton farming involve many other phases of extension work: Cooperative marketing, credit, clothing, home management, food and health, soil conservation, and other aspects of balanced farming and satisfactory rural life.

Extension work relating to cotton at present may be classified as educational and organizational services bringing to farm people a working understanding and use of:

(1) Government credit, price support, conservation, grading, and other programs affecting cotton production and marketing.

(2) The science and art of efficient production and marketing of cotton of the right varieties, staples, and grades in demand.

(3) The use of cotton on the farm; clothing, home improvement, livestock feeding, and the like.

(4) General promotion of cotton products through 4-H Club contests, dress revues, cotton-product demonstrations, exhibits, and the like.

(5) Facts about the place of cotton in individual farm programs as a major source of income or as one of several sources.

Science and the Farm

More and more cotton farmers realize the necessity for soil conservation, still more efficient production, and more diversified farming. The serious loss of foreign markets for cotton and the keener competition cotton faces from other domestic products, also increase the need for understanding and scientific solution of these problems by cotton farmers. National and international policy decisions and Government programs will have much bearing on the solution. They, however, need educational explanation, and the real answer to the problems will be the wisdom with which 1,500,000 cotton farmers again apply the best of scientific production and marketing practices in their everyday operations.

Extension educational efforts to that end include demonstrations, discussions, and advice to farmers about: Improved varieties; treating seed to prevent seed-borne diseases; results of fertilizer experiments; improved cultural methods; harvesting and handling the crop to protect the quality; rotating crops and growing legumes to improve the soil; terracing, strip cropping, and the like, to check erosion; balancing the farming with livestock and other crops; use of power machinery and labor-saving equipment; storing cotton. Handling latest scientific information and local farm experiences on each of these and countless other practices is a day-to-day job of cooperative extension workers.

The results have not been unimportant, though often the true cooperative educational accomplishments are not so easy to measure as are many other Government programs.

Longer Staple: The Extension Service has for a number of years put stress on educational programs urging farmers to grow longer staple varieties of cotton. Last year about 80 percent of the cotton grown in this country graded 15/16 inch or longer staple as compared with 44 percent in 1930. In South Carolina 99.7 percent of the crop last year was 15/16 inch or longer, and in North Carolina 96.7 percent.

One-Variety Communities: In 1931 a one-variety cotton-improvement program was started in cooperation with other agencies. The Extension Service was largely responsible for explaining and promoting the program at the local level. The objective was twofold: (1) To get farmers to grow improved locally adapted varieties, and (2) to get farmers over as wide an area as possible to grow the same variety because of the advantages in uniformity in ginning and marketing.

Last year there were one-variety communities in 569 of the 736 cotton-producing counties. The farmer members in those communities produced 40 percent of the entire cotton crop. The Bureau of Plant Industry, Soils, and Agricultural Engineering estimates that these farmers received more than $66,000,000 extra money because they got increased yields from the improved varieties and they got a premium over the regular market price for the better, more uniform cotton.

Improved Seed: Another important extension activity has been promoting the growth and use of improved certified cottonseed. Up to last year cottonseed improvement associations had been organized in 11 States. In 1943 they certified a total of 3,659,000 bushels of improved seed--enough to plant 17 percent of the estimated 1944 cotton crop.

Seed Treatment: Treating planting seed to kill seed-borne diseases that will attack the cotton plants was another practice pushed by extension agents. In Georgia last year three-fourths of the cotton acreage was planted with treated seed, as compared with only 20,000 acres in 1936. The value of the extra yield over untreated seed was about 4 million dollars. In South Carolina there was much the same story, and other States are making real progress in getting farmers to treat seed.

Soil Improvement: Another extension activity that has had a tremendous effect on increasing cotton yields has been demonstrating the importance of cover crops to improve the soil. In Alabama, for example, this program started in 1918. At that time only 1,500 pounds of winter legume cover-crop seed was planted. Last year nearly 20,000,000 pounds was planted. That was enough for 800,000 acres of winter legumes which when turned under contributed greatly to increased cotton yields in 1944 and to lower production costs.

Extension agents are also demonstrating and widely advocating other soil-improvement practices. Not the least of them is the efficient and more effective use of commercial fertilizer based on experiment station results and local farm experiences.

Insect Control: Cotton farmers have been led to adopt control measures sufficient to permit them to survive the boll-weevil threat. Despite this fact, for every seven bales of cotton produced, insects have taken about

one bale. That is the estimate of the Crop Reporting Service of the United States Department of Agriculture. That means that for every 7 bales of lint or linters, insects have taken 1 bale; for every 7 pounds of oil, insects have taken 1 pound; and for every 7 tons of cottonseed cake, insects have taken 1 ton. Much of this loss could have been prevented by treating those acres where the insect population was sufficiently high to warrant the employment of control measures worked out by the Bureau of Entomology and Plant Quarantine and cooperating State experiment stations. Some growers will lose much more of the crop than the average, and they often are the ones who can least afford to take the loss.

There is sufficient experimental and demonstrational evidence to show that in most areas and under most conditions cotton insects can be economically controlled. For instance, in the Louisiana delta, over a 20-year period, the average increase in pounds of seed cotton per acre of dusted cotton was 24 percent over that for undusted cotton.

The relatively few extension entomologists in the cotton States have made a creditable showing, when the amount of time they can devote to the control of cotton insects is considered. For example, as a result of a well-organized program in Alabama in 1943, 63 counties reported that 62,024 farmers applied poison on 246,730 acres of cotton. These farmers used 4,537,975 pounds of calcium arsenate. Based on the average increase in yield reported by county agents, this work saved 50,333 bales of cotton. At prevailing prices the cotton was worth over $5,000,000, and the cottonseed was worth about $1,225,000.

Some fundamental extension work with farm youth has been started in recent years to meet the cotton-insect situation. In a number of States 4-H Club members have been asked to make cotton-insect surveys on their own and adjoining farms and to submit reports of these surveys to their county agents and to their extension entomologists. Such survey reports have been useful in helping to obtain a satisfactory distribution of insecticides. They also have helped county agents and extension entomologists to evaluate insect populations in the States and counties and, most of all, have taught club members to study insect populations and determine the need for insect control.

Extension entomologists and county agents make every effort to inform the public of the trends in insect populations for the area as a whole. It rests with each farmer to examine his own field and determine the need for applying control measures. The press and radio have been used extensively. Fullest cooperation has been received from a number of commercial agencies operating in the area. Farmers, however, learn best by doing, and more local demonstrations, well-organized and supervised, are needed. Insect populations, weather conditions, and other factors have to be taken into account. If the cotton grower is to make a

reasonable margin of profit, he will necessarily need to consider all these factors which lower the cost of production. The fact that cotton insects vary in numbers on any one farm or in any community from year to year makes it necessary for farmers to know more about the habits of insects and the levels of population that would justify applying control measures. This suggests that the Extension Service has a still bigger job to do which will require more trained personnel.

Ginning Problems: It has long been realized that poor ginning equipment and methods and careless handling and storage can injure and lower the value of cotton. Within recent years the Extension Service has given a great deal of time and attention to the improvement of gins and ginning equipment and the improvement of practices in harvesting, handling, and storing cotton.

State extension specialists in agronomy and engineering have put special emphasis on this subject, and the Federal Extension Service has three cotton-ginning specialists located in the South. Their work includes, among other things, (1) the promotion of one-variety communities; (2) careful harvesting to prevent damage from excess moisture, and to keep out leaf and stem trash and immature or damaged cotton; (3) careful storage of seed cotton to insure its being dry, and uniform moisture condition for proper ginning; and (4) work with ginners on the conditioning and improvement of gins to protect the quality of the cotton.

The Federal and State extension specialists serve as technical advisers to ginners and ginning associations in the repair, conditioning, and handling of the gins.

Farm Management: Extension work in farm management and marketing in the South has been largely centered on increasing efficiency of production, obtaining better farm organization, facilitating use of long-time and production credit, and emphasizing the importance of proper warehousing and marketing.

The educational program in farm management has been based on efficient production practices and balanced farming. Emphasis has been placed on choice of enterprises to supplement cotton, more production for home consumption, more livestock and poultry, proper rotation of crops, and better land-tenure conditions. An effort has also been made to increase the efficiency of production by encouraging the use of more fertilizer, by properly organizing the farm to reduce lost motion and time, by encouraging the planting of improved varieties, and by helping in the organization of one-variety cotton-improvement associations.

In 1943, in 13 Southern States, 184,876 farmers were assisted in obtaining improved varieties or strains of cottonseed, and 323,712 in the use of fertilizers. There were 146,133 farmers assisted with problems of

land use based on soil types; 315,410 were assisted in the use of recommended crop rotations; 39,693 with strip cropping; 80,144 with constructing terraces; and 161,086 with contour farming of cropland. There were 44,417 farmers who were assisted in improving landlord-tenant relations and leasing arrangements. All these and other phases of extension educational work have given the mass of cotton farmers the know-how that allowed them last year to produce as much cotton on half the land they had in cotton 15 years ago. This has freed land for other crops, lowered cost of production, and made for better-balanced farming.

There have been special extension educational programs in the sound use of farm credit and in farm financial management. This work has included factual material on production credit, long-time credit for cotton farming programs, and the wise use of income. During 1943, 58,964 farmers were assisted with their credit problems. Stress has been placed on determining the size of loan the farm can properly and safely carry. Assistance has also been given to help guide the farmer in definite farm planning which will aid him in obtaining sound loans with low interest rates, and to help him plan for maximum returns from his farm.

Marketing: Special emphasis has been placed on those phases of cotton production that will help the farmer market his cotton at a better price. Ninety-five new cotton cooperatives were organized in 1943, and 2,376 of the established cotton cooperatives were assisted during the year. Extension's educational program has included efforts to obtain clean cotton of uniform quality and proper ginning practices. The importance of cotton classing and standards has been stressed, and, largely in connection with cooperatives, work has been done on warehousing.

High-Grade Cotton: The Extension Service has in recent years laid special stress on encouraging and helping farmers to produce high-grade cotton. Two years ago the State Extension Services, the Department of Agriculture, and the National Cotton Council joined in a strong cotton-grade promotion campaign. The war has demanded more high-grade cotton. Farmers get a premium for growing it, and the grade of our cotton will be improved in post-war trade.

The grade of cotton depends largely on how it is picked, ginned, and stored. The average grade of American cotton had been going downward every year since 1934. In 1943 it started upward again with 15 percent of the crop falling in the best grades (Strict Middling and Better), as compared with 7 percent the preceding year. A similar educational campaign was carried on this year, but it is too early to give average grade results.

Explain Government Programs

One of the most urgent jobs the Extension Service has performed during the war has been explaining to cotton farmers the many phases, often rapidly changing phases, of Government programs affecting their production and marketing practices.

The Extension Service has been designated by the War Food Administrator as the agency responsible for such educational work on all War Food Administration programs.

The details of price support, Government cotton loan rates, and what farmers had to do to qualify for these helps, had to be widely explained. Other programs extension agents explained, and answered countless farmer questions about, include: Farm machinery rationing, price ceilings as set by OPA, how to get necessary production credit, the Government's soil-conservation practices and how farmers can obtain payments for carrying out these practices, as well as many related programs.

Major extension educational effort went into explaining to cotton farmers the wartime needs and production goals for cotton and other crops and livestock, and assisting them in understanding and meeting these goals.

Most cotton farmers were helped in one way or another in getting necessary labor, working out labor-sharing arrangements, and adopting labor-saving devices through the Extension Service farm-labor program.

The Extension Service has carried to farmers information on cotton classification and grading services so that their cotton may receive its proper classification and as a further means of encouraging them to handle the crop in such a way as to get the highest quality possible.

In Arkansas, for example, last year 350,000 bales were classified under the Government's free classing program for organized communities, as compared with 12,000 bales in 1937.

Widespread extension work with farm outlook, post-war planning, and farmer discussion groups also did much to lay before cotton farmers facts about the complicated problems that will face cotton production after the war. Thorough understanding by farm people of the many factors that make up the future prospects for cotton is necessary if cotton farmers are to plan wisely.

Promote Use of Cotton Products

The Extension Service, in its livestock-feeding educational work, has done much to foster educational programs in the better feeding of farm animals, especially in the balancing of rations with protein supplements which promote wise use of cotton products on Southern farms and elsewhere over the country.

According to the 1943 annual reports of extension workers, assistance in improving methods of feeding was given during that year to 765,456 producers of poultry, 490,776 producers of hogs, 467,071 producers of dairy cattle, 169,768 producers of beef cattle, 86,674 producers of sheep, and 55,071 producers of other kinds of livestock.

Research work has shown that cottonseed products are a dependable and valuable source of protein for balancing the rations of all kinds of farm animals, and the Extension Service has had a large share in extending this information to the rank and file of stockmen, farmers, and poultrymen. As a result, these cottonseed products are popular throughout all parts of the country for use by farmers in mixing their own rations for supplementing pasture and range, and also as a constituent of commercially mixed feed.

Extension workers, especially in the South, have utilized the fact developed by scientific research, that cottonseed meal when fed to livestock losses less than one-fourth of its plant food value. They have advocated its feeding to livestock and the conservation and utilization of the resulting manure for fertilizing crops, rather than use of the meal as a direct fertilizer. This policy tends to foster better diversification of farming and contributes to increased soil fertilities, better utilization of farm labor, and all-round better living for those who live on the land.

Promotion of livestock enterprises by extension workers in the cotton-growing sections of the country has contributed materially to the stability and soundness of cotton production by permitting better crop rotation systems, increasing soil fertility, and confining cotton growing to such parts of the farm as offer higher yields per acre, and thus greater profits from the cotton enterprise.

County home demonstration agents, extension clothing specialists, and other extension workers, as well as farm leaders trained by Extension, have also done much to encourage fuller use of cotton goods in the farm home. Through cotton-product demonstrations and exhibits, dress revues, 4-H Club clothing contests, and the like, extension agents have promoted the general use of cotton goods. Reports from extension agents show that more than 237,000 families were assisted last year with clothing problems and 580,000 with consumer purchasing problems.

A Look Ahead

The Extension Service recognizes the importance of cotton to the entire Nation and especially to the agricultural economy of the South. Hence cotton becomes involved in virtually every segment of the extension educational program, especially in cotton-producing areas.

Though the general understanding by farmers, that extension educational programs have made possible, has had far-reaching effect, we know that much still needs to be done. Education is a continuous process, and too often we have not been able to concentrate our educational efforts strongly enough on specific problems, because of the personnel and facilities available and the total volume of needs for educational programs.

The problems cotton farmers now face--post-war demands, foreign markets, domestic competition, possible new uses--are so conflicting that increased emphasis on explaining the facts to farmers is necessary. In spite of the progress that has been made, continued and even greater emphasis must be put on efficient production, soil conservation, and balanced farming by the mass of cotton producers. These are problems on which we need more research or must wait for determination of national policy. However, we could make much progress if through educational demonstrations and organization work we could lead all cotton farmers to adopt scientific practices that we do know and that have proved effective for the farmers that have adopted them.

UNITED STATES DEPARTMENT OF AGRICULTURE
War Food Administration

(Material for presentation to the Special Committee of the House Committee on Agriculture on Post-War Farm Programs - Hearings on December 4, 1944)

POSTWAR FOREIGN MARKETS FOR AMERICAN COTTON

By L. A. Wheeler, Director of Foreign Agricultural Relations

The problem of foreign markets is of great importance in appraising the postwar cotton situation. This is so simply because we have developed a cotton producing capacity in this country capable of supplying far more than our domestic requirements. If we do not have foreign markets we will have to cut down our production drastically.

Admittedly, an appraisal of postwar foreign markets must be highly speculative. There are a good many unknowns in the situation. Nevertheless, we will be borrowing trouble if we take the position that the future is obscure and uncertain and we must just wait and see what happens. While we may be able to see only dimly the many facets of the postwar situation, we can make certain assumptions on the basis of past experience and present conditions and then consider what our program for retaining foreign markets should be under the most likely of the various possibilities.

The points concerning which it is necessary to try to make some assumptions may be listed as follows:

1. The exportable surplus position of the United States
2. The exportable surplus situations in other exporting countries
3. The probable requirements of the cotton importing countries of the world, and finally
4. The share of the world cotton market that the United States might expect to get under various possible postwar conditions.

First, then, as to the supply of cotton in the United States. I have already suggested that if we have no foreign markets we must cut down our production. Of this I think there can be no doubt. Even during the war, with our domestic consumption greatly increased, we have been accumulating excess supplies. Domestic consumption is likely to be lower after the war rather than higher, so the conclusion must be that, with present acreage and yields, we will be producing an exportable surplus.

Secondly, we must make some assumption as to the supplies that may be available in other exporting countries. This is not as easy to appraise as our domestic supply situation, since in some cases, as in Egypt, cotton production has been greatly reduced while in others, such as Brazil, production has been expanded - in the latter case in spite of a falling off in exports. But taking a general view we do know that, even with a net reduction of cotton production in foreign countries during the war, there has been a very marked increase in the carryover stocks of foreign produced cotton. Such carryover stocks of foreign cotton have risen from 7,500,000 bales in the 1939-40 season to 14,380,000 bales in the 1944-45 season. It is evident that, immediately after the war, supplies of foreign cotton are going to be abundant. In the longer run, with the removal of wartime handicaps to production, there is every reason to expect that foreign production will at least regain its prewar status.

A third assumption has to be made as to the likely requirements of the cotton importing countries of the world and the relation of these requirements to the available exportable supplies in the producing countries. It is extremely difficult to estimate these requirements. Perhaps the best way to tackle it is to consider what the trend of import requirements was before the war, the effect of the substitution of synthetic fibers for cotton, and finally what the general international economic and trade situation may be after the war.

As regards the first point, the trend of world import requirements before the war, it is I think of interest that during the inter-war period the amount of cotton entering into world trade tended to fluctuate in the neighborhood of 13,000,000 bales per annum. There is no definite indication of either a rising or declining trend. This fact by itself is perhaps of no great significance. But it is significant that during the same period world cotton consumption did show a definite upward trend. This rise in world consumption at a time world trade was barely holding its own is explained by the fact that the cotton growing countries were doing more manufacturing of textiles for domestic use as well as for export. There has been an accentuation of this tendency during the present war, particularly in India and Brazil.

A second important factor in the postwar cotton import situation concerns the problem of substitute fibers. It is clear that during the war there has been a marked expansion in the production of synthetic fibers, particularly in the countries which before the war were large importers of cotton. To a considerable extent this development has been due to the non-availability of cotton and the relatively greater availability of the raw materials from which synthetic products are made. But it has also been due to extensive technological advances. Consequently, even when cotton becomes freely available, it is not to be expected that these deficit countries will abandon the production of the synthetic substitutes. On the contrary, with the technological improvements already made and those that will doubtless occur, it should

rather be expected that substitute fibers will be much more important competitively than before the war. This tendency is likely to be accentuated in any cotton importing country that finds its foreign funds too short to cover all of the purchases it would like to make abroad.

A third factor which will have a considerable influence on the amount of cotton that moves in world trade after the war is the situation as regards economic activity and international trade as a whole. We can be quite sure that the amount of cotton moving in world trade will be less if the nations of the world experience a certain measure of economic depression and are led to pursue highly nationalistic policies as a result. Obviously, there will be a better opportunity to sell cotton in an expanding world economy. It is impossible for anyone to predict exactly what will happen in a field affected by so many factors, economic as well as political. But one thing is certain, the prospect for a high level of economic activity in all countries of the world will be enhanced by national policies that are conducive to a large exchange of goods among the nations of the world. And such national policies will be much more likely to prevail in a world in which international collaboration is the rule rather than the exception.

Taking these various factors into account, it seems safest to assume that world import requirements for cotton after the war will be no larger than the average imports before the war, or about 13,000,000 bales per annum.

The next assumption we must make concerns the share that the United States may expect to get out of this total. This will hinge largely upon two factors. The first and most important is that of price. The second is that of available dollar exchange in the countries that need to import cotton.

First, as to price. The United States now has a policy of governmental support of the price of cotton at close to parity. I think it is well to bear in mind that this particular formula of parity is an American formula and has not been adopted in other cotton producing countries. It is by now pretty clear that a price resulting from this American formula is higher than the prices at which other cotton exporting countries are prepared to increase production and exports of cotton. If this is so, it is also clear that the United States must be prepared to accept lower than parity prices on export cotton if it is to maintain its position in world markets. I do not go so far as to say there would be no exports even at parity since for some time to come it is quite possible that other exporting countries will not be in a position to supply the total import demand. But the United States would be in the position of having to take what was left over after other countries got the lion's share.

The second factor is that of the purchasing power of our foreign customers, either in the form of dollars or of gold. In the short run this over-all purchasing power may be quite substantial because of wartime developments. For one thing, some countries have increased considerably their holdings of gold and their capacity to produce it. For another thing, the United States has had to cut down on commercial exports and at the same time has purchased considerable amounts of war materials abroad and has paid out dollars in connection with the construction of bases and the maintenance of our forces in foreign countries. An additional short run factor will be our loans and investments abroad. All in all it would not seem as though a shortage of dollars would be, in the short run, a decisive factor in limiting the quantities of American cotton bought by the importing countries.

In the long run, however, in view of our position as the greatest creditor country of the world, the ability of our foreign customers to find the dollars they need in order to buy from us will depend fundamentally on our willingness to accept goods and services from abroad. This means that we should have a positive rather than a negative attitude toward imports. The effort should be to see, in the light of our own domestic situation and policies, how much we can accept rather than how little. Our reciprocal trade agreements program could play an important part in the carrying out of such a positive policy.

It should be remembered, however, that the fact that foreigners may have a large supply of dollars does not necessarily mean they will spend those dollars for United States cotton. In the postwar world foreigners will be looking to the United States for many things, such as machinery to rebuild their industries and equipment for their transportation systems. After reconstruction foreigners will continue to look to the United States for many industrial products, which because of our mass production methods can be obtained here in better quality and at cheaper prices than from anywhere else in the world.

This leads us back, therefore, to the question of cotton prices. It should be abundantly clear that with prices in the United States maintained at or near parity this will not be the country that foreign countries will look to first in obtaining their raw cotton supplies.

Steps have already been taken to put our export price of cotton on a competitive basis. This export program will be covered in another statement to your committee. I wish only to point out certain international implications.

There is no doubt that, so long as funds are available, the present or a similar export program can put our prices on a basis that will be attractive

to foreign importing countries. I may say in this connection that we have some advantage in the fact that over many years American cotton has established a name for itself in many countries of the world.

But what is likely to be the effect of such a program on the world cotton situation? This will depend in large measure on how the program is actually operated. If it is operated from a completely national point of view with the idea of disposing of all the surplus supplies in the shortest possible time, the program can not fail to have an extremely depressing effect on world market prices. It could also involve the United States in a trade war which, besides being costly in terms of public funds, would seriously disturb our international economic relations.

If, on the other hand, the program is operated conservatively with a view to having the least possible effect on world prices, the result would be that the money cost would be small but we would dispose of very little cotton.

There is a third alternative, and that would be to seek, in consultation with other cotton producing and cotton exporting and importing countries, a collaborative arrangement which would assure cotton importing countries of adequate supplies, on the one hand, and would, on the other hand, assure reasonable shares for each of the exporting countries in filling these requirements.

It seems to me that there can be no doubt as to the course that should be taken. Every effort should be made, in cooperation with other interested countries, to find a collaborative solution. It seems to me the only question is, what are the chances of doing so?

It is important, I think, not to minimize the difficulties. There is very little doubt but that all of the countries interested will be prepared to get together to discuss the problem. The question is, will they be able to agree to a solution? I must say quite frankly that the answer to that is not free of doubt. A good many attempts in the direction of international commodity collaboration were made during the inter-war period. In some cases agreements were reached and were put into effect. In other cases it was not possible to go any further than simply to set up machinery for an exchange of information. In general, there were few cases in which there was an effective international program. Still, it should be noted that the United States has actually entered into international agreements with respect to sugar and coffee and has entered into a provisional arrangement in respect to wheat.

I should like to touch briefly on the wheat agreement because it seems to offer the best illustration of the possibilities. In doing so I should say

first of all that attempts to negotiate an international agreement on wheat date back to the early nineteen thirties and, although an agreement of a sort was reached in 1933, it lacked effective operating provisions. It was not until 1942 that practical results were obtained. In that year an interim agreement was reached between the four principal wheat exporting countries of the world, the United States, Canada, Australia and Argentina, and the principal wheat importing country of the world, the United Kingdom. This agreement provides among other things for allocations of exports between the exporting countries, it provides the mechanism for establishing world price limits and it has provisions for limiting the accumulation of stocks and for expanding consumption through contributions for relief, and in other ways. It should be emphasized that the agreement is not now and has not been in full force and effect. What has been accomplished is that an interim arrangement has been made between the five countries principally concerned and what might be called a world wheat charter has been drawn up which can be placed before a truly representative international meeting when conditions are such as to make this step desirable.

The principal feature of this world wheat charter which sets it apart from practically all of the international agreements attempted during the nineteen thirties is the emphasis that is placed on getting a truly representative adherence including not only all of the important wheat exporting countries but also all of the more important wheat importing countries. It also places particular emphasis on the importance of securing as large a world consumption and trade as possible.

As I said before, experience does not give grounds for too much optimism, But perhaps here is a case where past experience is not a very good guide. For instance, critics of prewar commodity agreements have called attention to their restrictive nature. But they appear to overlook the fact that these early attempts toward international commodity collaboration were made at times when prices were at record low levels and the position of the producers of primary products was desperate. It was hardly the setting in which one would expect positive action toward a further expansion of supplies already in excess. Conversely, other critics point to the failure to obtain international agreements on particular products as an argument against this type of international economic collaboration. But here again it must be remembered that the years between the wars and, more particularly, the period from 1933 to 1939, were not years of genuine peace. They were, in fact, years which were characterized by economic warfare and a state of world political affairs in which collaboration of any kind between governments was extraordinarily difficult.

We have every reason to hope, in fact to expect, that these unfavorable general conditions will not prevail in the period immediately following the war. In the first place, prices will not be at a low ebb. They will, in fact, be supported by the governments of various producing countries at levels considerably higher than prevailed in prewar depression years. But more important it seems to me is the prospect for a more favorable general attitude toward international cooperation. This is evidenced in the United States by resolutions passed by both houses of Congress and statements of the President and of the Secretary of State. It is evidenced by the numerous international conferences and meetings that have been held even before the war has been brought to an end. Such conferences point to a new method of handling international problems in the years ahead. In this kind of environment there is reason to have a considerable degree of optimism as regards the question of effective international economic collaboration. And in this general field of international cooperation there is not, from the point of view of the United States, a more important segment than that which concerns the future of international trade in cotton.

UNITED STATES DEPARTMENT OF AGRICULTURE
War Food Administration

(Material for presentation to the Special Committee of the House Committee on Agriculture on Post-War Farm Programs - Hearings on December 4, 1944)

FOREIGN COTTON PRODUCTION

By P. K. Norris, Principal Marketing Specialist
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In response to the invitation of the Committee I shall try to present as briefly as possible a summary of such information as we have pertaining to the production of foreign cotton. My comments will be based largely upon the observations I have made since 1930. As an employee of the Department of Agriculture I have studied the production of cotton in the leading cotton countries of the world. I have spent considerable time in several of them and have reported my findings regarding their ability to grow cotton to the Department. A number of these reports have been published from time to time.

Of the more than 50 countries that produce cotton India, Russia, China, Egypt and Brazil produce from 85 to 90 percent of the total foreign crop. The quantity and quality as well as the production outlook has a direct bearing upon the sale of United States cotton abroad.

India is the largest foreign cotton growing country. In recent years the crop has fluctuated between 3-1/2 and 5-1/2 million bales. Most of it is of the Asiatic species with a staple of 7/8 inch and less. Prior to the present war exports were largely to Japan and the United Kingdom.

The yields of approximately one hundred pounds per acre reflects to some degree the poor soil, low yielding varieties, insect damage and primitive culture practices common throughout India.

India is about 1/3 the size of the United States with about three times our population. Because most of the culturable area is required for food production, there is comparatively little opportunity to plant large areas to non-food crops. The rainfall conditions are such that over most of the country only one crop a year can be grown. Although irrigation is becoming more and more important, it is not expected that it will increase fast enough to enable the Indian farmer to grow a food supply and at the same time expand the area of non-food crops, such as cotton. Based on present yields an increase of a million bales of cotton per year would require something like an additional 5 to 6 million acres of land. Under such conditions it is doubtful if the Indian farmer will attempt to produce more than 5 to 6 million bales.

The fact that we do not expect a large expansion of cotton acreage does not mean that Indian cotton does not and will not continue to compete with our cotton. The government has been successful in the development and expansion of irrigation and the breeding of higher yielding and longer staple varieties, as well as improving culture practices. The fact that progress has been made in this direction suggests the competition we may expect in the future. As mentioned, a great deal of the Indian crop is of the native short staple varieties grown under rainfall conditions. With the expansion of irrigation the production of American Upland varieties will increase. This will increase both the yield and staple length without an increase in cotton acreage.

The Soviet Union is perhaps the second most important cotton growing country but like China there are very little detail data available. Annual production in the Soviet Union has been estimated at from 2-1/2 to 4-1/2 million bales in recent years. Most of this cotton is grown in Asia and to a large extent under irrigation, although some production is in areas where the crop is dependent upon rainfall. So far as is know no American Agricultural experts have visited the chief cotton growing areas of the Soviet Union. The production of cotton is regulated by a government program or policy. The policy is to increase and extend production. What the future policy may be is a matter of speculation, but it seems reasonable that the government will make every effort to produce enough cotton to supply domestic requirements. Normally the Soviet Union is not a cotton exporting nation, but some Russian cotton has been sold on world markets.

Prior to the outbreak of Chinese-Japanese war in 1937 China was the third largest foreign cotton growing country. It is known that there are large areas throughout central and north China where cotton is being produced or can be produced. The increase prior to the outbreak of the war was largely due to the demand of domestic mills, the efforts of the Chinese government in stimulating production, and to a domestic tariff on raw cotton. Before the war it appeared that China might become self-sufficient as far as mill requirements were concerned but under conditions that are likely to prevail at the end of the war it is extremely difficult to forecast the situation or to be very definite about the future of China.

The cultivated area of Egypt is definitely limited to the Delta and the valley of the Nile. In this area of some 8 million acres, approximately 15 million people live. The system of perennial irrigation, the mild climate, productive soil and the industry of the people make it possible to grow some kind of a crop continously throughout the year. Prior to the present war Egypt produced form 1-1/2 million to a little more than 2 million bales annually. Since the war acreage has been reduced approximately 50 percent, but this is a temporary measure and as soon as the war is over cotton acreage will undoubtedly increase and within a few years will again be normal. Due to the limited area and the demand for food

crops, it is not likely that Egypt will in the near future produce much in excess of 2 million bales annually.

The quality of the Egyptian cotton places it at the top of the list of commercial cotton. It is a long staple cotton ranging from 1-1/8 inch up to more than 1-1/2 inch in length. It is well known in the spinning centers of Britain and Europe. It competes with the longer staples of the United States in markets throughout the world.

Up until about 10 years ago Brazil was classed as a minor cotton growing country but in the last 15 years Brazil and especially southern Brazil has become one of the chief cotton growing areas of the world. There are two cotton growing belts of Brazil. Northeast Brazil is the old area while southern Brazil is the new and spectacular area. From the standpoint of U. S. grown cotton the State of Sao Paulo appears to be the most competitive area in the world. This State and the area of the bordering States are producing more than 2 million bales of what is, with the possible exception of Mexican cotton, the most nearly identical with United States cotton of any cotton in the world. The developments that have occurred in this area are the results of definite plans on the part of well trained government officials and private interests. The soil is capable of producing good crops and the varieties grown are in many respects equal to, and some respects superior to some of our varieties. For example the staple is so uniform that many handlers of Sao Paulo cotton only sample about one bale in 10 to determine its staple length. For practical purposes, the whole area is a one variety community. The gins, most of which are of American origin, are new and modern. The distribution of seed by the State, the supervision of the gins, along with the state classification services have been important factors in the production of uniform cotton throughout the State. This cotton has been and is being sold on world markets by both Brazilian and foreign merchants. Several of the American merchants are also engaged in cotton merchandising in this country.

In southern Brazil the potential cotton area is as large as the combined area of Texas, Oklahoma, Arkansas, and Louisiana. Much of it is undeveloped and unsettled. The expansion that has occurred has been in the districts where agriculture is relatively well established, but as the population increases or moves to the new areas we may expect considerable expansion of cotton production in southern Brazil.

In northern Argentina is an area as large as Oklahoma where cotton production in the last 15 years has become an established enterprise. This cotton is also an American Upland origin and as it is sold on world markets it competes with United States grown cotton. Conditions under which it is grown are similar to those prevailing in the western part of our cotton belt. It is a prairie rising in elevation from east to west.

The policy of the government of Argentina is to expand cotton production. The encouragement of settlers, the development of roads, gins, and experiment stations along with the distribution of improved seed are all a part of the government policy. In the last 15 years production in the Argentine has increased from about 150,000 bales to more than 500,000 bales. Possibilities of increasing production are limited by the man-power situation. As the population increases production will increase and with the present system of State supervision and control of the industry we may expect the quality of the crop to improve as well.

Since about 1900 cotton production throughout central Africa has increased steadily. It has been encouraged by organizations of both a government and private nature. The British, French, Belgians, and Portuguese have through government and semi-government organizations fostered the expansion of the cotton area in Uganda, Tanganyika, the Anglo-Egyptian Sudan, the Belgian Congo, French Equatorial Africa, Nigeria, and Mozambique. From practically nothing in 1900 this area has increased until at the outbreak of the present war its total production was about a million bales. Practically all of this cotton is of American Upland varieties and is produced by natives who only a few years ago were classed as savages. They are still very primitive although in many parts of the area they use up-to-date ginning machinery, and plant improved varieties of cotton. This cotton is sold to spinners who a few years ago used only American cotton. The outlook for future expansion in these areas is dependent upon government policy and the education and development of the natives. The methods used by the governments to organize native production are unique. A fixed price to the natives regardless of the world prices has been an important factor. The work of missionaries and commercial traders in stimulating the desires of the natives for the hundreds of commodities used by civilized men, have also caused them to grow cotton. A large part of the government revenue is collected from an export tax on cotton. Government officials who realize the place of this revenue in the budget encourage the spread and expansion of cotton growing.

There are a number of other countries where cotton is being produced, some of which have possibilities for expansion or further development, but on the whole the areas and countries mentioned are the most competitive with the United States cotton belt. Practically all of the expanded production that has occurred in the last 25 years has been of the types and qualities that compete directly with American cotton in the spinning centers throughout the world.

UNITED STATES DEPARTMENT OF AGRICULTURE
War Food Administration

(Material for presentation to the Special Committee of the House Committee on Agriculture on Post-War Farm Programs - Hearings beginning December 4, 1944.)

SUMMARY OF THE MORE IMPORTANT FEDERAL STATUTORY PROVISIONS APPLICABLE TO COTTON

Prepared under the direction of the Solicitor of the United States Department of Agriculture and of the War Food Administration

I. Price Support Obligations of the Government.

1. Section 8 of the Stabilization Act of 1942, as amended,[1] directs the Commodity Credit Corporation to make non-recourse producer loans on cotton at the rate of 92½ percent of parity, except as to cotton harvested after 1943 but planted before 1945 for which the loan rate is 95 percent of parity. Loans under Section 8 must be continued for at least two years after the war. When acreage allotments and farm marketing quotas are in effect under the Agricultural Adjustment Act of 1938, as amended,[2] loans at the full rate are available only to cooperating farmers, and noncooperators are entitled to loans only on that part of their production in excess of their quotas and at only 60 percent of the full loan rate. Such loans are not available if marketing quotas for cotton for the marketing year in which the crop is harvested have been disapproved by more than one-third of the cotton farmers voting in the producer referendum.

   Other provisions of law applicable to loans under the Agricultural Adjustment Act of 1938, as amended, are, to the extent compatible, applicable to loans under Section 8 of the Stabilization Act, as amended. [3]

2. The so-called Steagall Amendment, as amended,[4] directs the War Food Administrator,[5] whenever he finds it necessary to encourage the expansion of production of any non-basic commodity during the

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1/ 50 U.S.C. App. §968 (Supp. III), Pub. L. No. 383, 78th Cong., 2d Sess. (June 30, 1944) §204, Pub. L. No. 457, 78th Cong., 2d Sess. (October 3, 1944) §37.

2/ 7 U.S.C. §1281 et seq. (1940).

3/ 7 U.S.C. §1302 (1940), contains most of the applicable provisions. Under these provisions, for the purpose of computing cotton parity, 7/8-inch Middling cotton is regarded as the average.

4/ Section 4(a) of the Act of July 1, 1941, as amended, 15 U.S.C. §713a-8(a) (Supp. III).

5/ See Executive Order No. 9334 of April 19, 1943, 8 Fed. Reg. 5423 (1943) transferring powers of the Secretary of Agriculture to the War Food Administrator.

existing emergency, to make public announcement thereof, and thereupon to use any available funds (taking into account the funds available for all such commodities) to support the price of such commodity at not less than 90 percent of its parity or comparable price through commodity loans, purchases, or other operations, and to continue such supports for two years after the war. 6/

3. The Act of July 1, 1941 7/ also declares it to be Congressional policy that the lending and purchase operations of the Department of Agriculture shall be carried out so as to bring the price and income of producers of non-basic non-Steagall commodities to a fair parity relationship to basic and Steagall commodities, to the extent that funds for such operations are available, after taking into account the operations as to basic and Steagall commodities and the ability of producers to bring supplies into line with demand. 8/

4. During the fiscal year 1945 the President is also required to take all other lawful action through any agency of the Government to assure that producers of basic and Steagall commodities receive not less than the higher of (1) the parity or comparable price, or (2) the highest price received by producers between January 1 and September 15, 1942, as adjusted for grade, location, and seasonal differentials. 9/

II. Handling and Disposal of Cotton by the Government.

1. The Commodity Credit Corporation item in the Department of Agriculture Appropriation Act, 1945, 10/ which makes funds of the Corporation available for its administrative expenses, prohibits (with certain exceptions) the use of any such funds for administrative

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6/ Such an announcement has been issued with respect to American-Egyptian cotton.

7/ Section 4(b) of the Act, cited supra note 4.

8/ Consistent with this declaration of policy, price supporting loans are being made upon Sea Island cotton and the price of cottonseed is being supported.

9/ Section 201(b) of the Stabilization Extension Act of 1944, Pub. L. No. 383, 78th Cong., 2d Sess. (June 30, 1944). In accordance with this provision, Commodity Credit Corporation is carrying out a 100 percent of parity purchase program with respect to the 1944 crop of cotton. As American-Egyptian cotton is now selling at substantially above its parity price, no action is necessary at present with respect to it.

10/ Pub. L. No. 367, 78th Cong., 2d Sess. (June 28, 1944). No other funds may be used by Commodity Credit Corporation for administrative expenses. Act of June 22, 1936, 15 U.S.C. §712a (1940).

expenses in connection with the sale of cotton at less than parity,11/ unless such cotton has substantially deteriorated in quality or is being sold for new or by-product uses. Another exception, made by the recently enacted Surplus Property Act of 1944,12/authorizes the Commodity Credit Corporation to dispose of or cause to be disposed of for export any farm commodity or product thereof for cash, its equivalent in goods, or adequately secured credit, and at competitive world prices, without regard to any of the statutory provisions imposing restrictions on its sales of such commodities, provided, in the case of food or food products, domestic supplies are adequate.

2. Section 381(c) of the Agricultural Adjustment Act of 1938 provides that no cotton held on behalf of the United States shall be sold unless the proceeds are at least sufficient to reimburse the United States for all amounts paid out with respect to the cotton sold. This section also limits sales of cotton by the Corporation to not more than 300,000 bales in any calendar month and 1,500,000 bales in any calendar year. 13/

3. Section 32 of the Act of August 24, 1935,14/annually appropriates an amount equal to 30 percent of the gross customs receipts for use by the Secretary of Agriculture to (1) encourage exportation of agricultural commodities and products by the payment of benefits in connection with such exportation or indemnities for losses incurred in connection with such exportation or by payments to

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11/ The method that has been used under the Corporation's loan programs for determining the parity price equivalent for Middling 7/8-inch cotton at the average location used in fixing the base loan rate for cotton must be used for determining the parity price equivalent for Middling 7/8-inch cotton at such average location for the purposes of this provision. In this connection see note 3, supra.

12/ Pub. L. No. 457, 78th Cong., 2d Sess. (October 3, 1944). Commodity Credit Corporation is now conducting a cotton export program under this section. In this connection, see the Act of August 11, 1939, 15 U.S.C. §713a-7 (1940), which authorizes Commodity Credit Corporation to exchange surplus domestic agricultural commodities for stocks of foreign strategic and critical materials, in fulfillment of any treaty involving an exchange of such materials which might be concluded by the United States. Pursuant to that act, cotton has been exchanged for rubber.

13/ 7 U.S.C. §1381(c) (1940). See also section 383 of the Agricultural Adjustment Act of 1938 and the Act of June 16, 1938, 7 U.S.C. §§1383, 1383(a) (1940), which generally require that Commodity Credit Corporation shall place all cotton insurance with insurance agents who are bona fide residents of and doing business in the State where the cotton is warehoused, and that Commodity Credit Corporation shall not reconcentrate or move cotton securing its loans from one warehouse to another without the written consent of the borrower.

14/ 7 U.S.C. §612c (1940).

producers in connection with the production of the quantity of such commodities required for domestic consumption, (2) encourage domestic consumption of such commodities or products by diverting them from the normal channels of trade and commerce or by increasing their utilization among persons in low income groups, and (3) reestablish farmers' purchasing power by making payments in connection with the normal production of any agricultural commodity for domestic consumption. During any fiscal year, not more than 25 percent of the funds available under this section for such fiscal year may be devoted to any one commodity or the products thereof. 15/

4. Section 21 of the Surplus Property Act of 1944 16/ makes the War Food Administrator solely responsible, subject to the supervision of the Surplus Property Board, for the formulation of policies for the disposal under that Act of surplus agricultural commodities and surplus foods processed from agricultural commodities. These policies are to be administered by the agencies designated by the Board, and are to be so formulated as to prevent such commodities and products from being dumped upon the market in a disorderly manner and disrupting market prices for agricultural commodities. The Board is prohibited from exercising any of its powers under the Act with respect to the disposal of surplus cotton goods except with the War Food Administrator's written approval.

This section also makes the quantity and price limitations applicable to sales by Commodity Credit Corporation applicable to sales of surplus farm commodities in the United States under the Act and prohibits any such sales at less than the current prevailing market prices.

III. Maximum Prices for Cotton.

Under the Emergency Price Control Act of 1942, 17/ the Stabilization Act of 1942, 18/ and the Stabilization Extension Act of 1944, 19/ maximum prices may be established and maintained for cotton and cotton products, as well as other commodities, on the basis of price levels, so far as practicable, which existed on September 15, 1942. Such prices are subject to specified adjustments, however, and

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15/ Programs have been carried out under this section with respect to cotton and cotton goods.

16/ Cited supra note 12.

17/ 50 U.S.C. App. §§901 et seq. (Supp. III).

18/ 50 U.S.C. App. §§961 et seq. (Supp. III).

19/ Pub. L. No. 383, 78th Cong., 2d Sess. (June 30, 1944).

may not be so low as to reflect to cotton producers less than the parity[20] or the highest price between January 1 and September 15, 1942 (applied separately, in the case of products made in whole or major part from cotton or cotton yarn, to each major item). [21]

IV. Agricultural Soil Conservation.

Sections 7 to 17 of the Soil Conservation and Domestic Allotment Act, as amended,[22] authorize the Secretary of Agriculture to make conditional payments or grants of other aid to agricultural producers, including cotton producers, in order to effectuate soil conservation and to reestablish, at as rapid a rate as the Secretary determines to be practicable and in the public interest, the ratio between the purchasing power of the net income per person on the farms and that of the income per person not on farms that prevailed during the five-year period between August 1909 and July 1914, inclusive. Payments or grants are authorized for two general types of performance: namely, the carrying out of soil-building practices, and adherence to acreage allotments established for soil-depleting crops such as cotton. However, limitations contained in the Department of Agriculture Appropriation Acts for 1944 and 1945[23] now restrict the program generally to one of soil-building and soil and water conservation practices.

V. Farm Marketing Quotas.

Under the Agricultural Adjustment Act of 1938, as amended, whenever the Secretary determines that the total supply[24] of cotton for any marketing year exceeds by more than seven percent the

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20/ This section also provides that the method used at that time for the purposes of making loans for determining the parity price equivalent for Middling 7/8-inch cotton at the average location used in fixing the base loan rate for cotton must also be used for determining the parity price equivalent for Middling 7/8-inch cotton at such average location for the purposes of this section, and that any adjustments for grade, location, or seasonal differentials shall be made on the basis of the parity price so determined. In this connection, see note 3, supra.

21/ Section 201(b) of the Stabilization Extension Act of 1944, cited supra note 19.

22/ 16 U.S.C. §§590g et seq. (1940), §590h (Supp. III).

23/ Pub. L. No. 129, 78th Cong., 1st Sess. (July 12, 1943), and Pub. L. No. 367, 78th Cong., 2d Sess. (June 28, 1944).

24/ The "total supply" of cotton for any marketing year is the carryover for such year, plus the estimated United States production during the calendar year in which such marketing year begins. 7 U.S.C. §1301(b)(16)(A) (1940).

normal supply[25] for such year, the Secretary is required to proclaim such fact not later than November 15 and farm marketing quotas for cotton are in effect during the succeeding marketing year,[26] provided they are approved by at least two-thirds of the cotton farmers voting in a referendum.[27]

The farm marketing quota is the number of bales of cotton equal to the normal production or actual production, whichever is the greater, of the farm acreage allotment, plus any penalty free cotton carryover from a previous crop.[28] The farm acreage allotment is computed by apportioning the national allotment, as established by the Secretary of Agriculture, among the State, the State allotment among counties, and the county allotment among farms, all on the basis of production history, with certain adjustments.[29] Any producer marketing cotton in excess of his farm marketing quota is subject to a penalty equal to 50 percent of the basic rate of the loan to cooperators.[30] Marketing quotas for cotton are not now in effect, in view of the national emergency situation.[31]

VI. Parity Payments.

Section 303 of the Agricultural Adjustment Act of 1938[32] directs the Secretary of Agriculture to make parity payments on the normal production of cotton and other basic commodities, if and when appropriations are made therefor, in amounts which, together with the proceeds from the commodity, will provide a return to producers as nearly equal to parity price as the funds made available will permit. Such appropriations have not been made for any crop since the 1942 crop.

VII. Import Restrictions.

Section 22 of the Agricultural Adjustment Act (of 1933)[33] provides for the imposition by the President of import quotas and fees, within certain limits, on any article, including cotton and cotton

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25/ The "normal supply" of cotton for any marketing year is a normal year's domestic consumption and exports, plus 40 percent thereof. 7 U.S.C. §1301(b)(10)(A) (1940).

26/ 7 U.S.C. §1345 (1940).

27/ 7 U.S.C. §1347 (1940).

28/ 7 U.S.C. §1346(a) (1940).

29/ 7 U.S.C. §§1343 et seq. (1940), §1344(j) (Supp. III).

30/ 7 U.S.C. §1348 (1940), §1340(9) (Supp. III).

31/ 7 U.S.C. §§1304 (1940), §1371(b) (Supp. III).

32/ 7 U.S.C. §1303 (1940).

33/ 7 U.S.C. §624 (1940).

products, the importation of which threatens the objectives of certain farm programs under the Agricultural Marketing Agreement Act of 1937[34] or the Soil Conservation and Domestic Allotment Act, as amended,[35] or Section 32 of the Act of August 24, 1935, as amended,[36] after investigation by the United States Tariff Commission.

VIII. Crop Insurance.

Although the Federal Crop Insurance Act, as amended,[37] authorizes the Federal Crop Insurance Corporation to insure cotton producers against flood, drought, hail, and other unavoidable causes upon terms and conditions specified in the act and by the Board of Directors of the Corporation, the Corporation, by reason of a limitation contained in the Department of Agriculture Appropriation Acts for 1944 and 1945,[38] has not insured any cotton since the 1943 crop. H.R. 4911, which is currently pending before the Congress, would provide a basis for reinstating a cotton crop insurance program, though under terms and conditions different, in some respects, from those provided for in the present Federal Crop Insurance Act.

IX. Private Trading in Cotton.

1. The "United States Cotton Futures Act", as amended,[39] is designed to encourage the use of Federal standards in futures trading in cotton, and the tender, in settlement of certain futures contracts, of cotton which has first been classed by officers of the Government on the basis of the standards established by the Department of Agriculture; and requires the supervision of spot cotton quotations in designated markets.

2. The Commodity Exchange Act, as amended,[40] requires, with respect to cotton, that all trading in cotton futures be conducted on contract markets designated by the Secretary of Agriculture, and that contracts on such markets provide for the delivery of cotton by U. S. grades. It authorizes the Commodity Exchange Commission to establish limits on speculative trading to prevent unwarranted fluctuations in price, makes illegal specified fraudulent and deceitful practices with respect to cotton futures, and requires that commission merchants segregate the funds of customers.

34/ 7 U.S.C. §§601 et seq., §§671 et seq. (1940).
35/ Cited supra note 22.
36/ Cited supra note 14.
37/ 7 U.S.C. §§1501 et seq. (1940), §§1502 et seq. (Supp. III).
38/ Cited supra note 23.
39/ 26 U.S.C. §1920 et seq. (1940).
40/ 7 U.S.C. §1 et seq. (1940).

X. Classification, Standards, Statistics, Testing and Information.

1. The United States Cotton Standards Act,[41] regulates transactions in American cotton in interstate and foreign commerce; requires the use of the official cotton standards and linters standards in all transactions in such commerce wherein any standard descriptions are used; provides for the sale of copies of standards to the public; and provides for classification of cotton and cotton linters, and for the licensing of classers.

2. The "Cotton Grade Staple Statistics Act", as amended,[42] authorizes the collection and publication of statistics and estimates of the grade and staple length of cotton; and provides for classification and market news services to producer groups organized for cotton improvement. This act also provides for the classification of cotton on request of producers, the collection and publication of information as to market supply, demand, condition, and prices of cotton; and authorizes the Secretary of Agriculture to make analyses of fiber properties, spinning tests, and other quality tests of cotton samples submitted to him by cotton breeders.

3. The Farm Products Inspection Provision, Department of Agriculture Appropriation Act, 1945,[43] provides for the investigation of and certification to shippers and other interested parties of the class, quality, and condition of cotton and other agricultural products.

4. The Act of June 15, 1929,[44] prohibits the inclusion in any governmental report, bulletin, or other such publication of any prediction with respect to cotton prices upon penalty of fine from $500 to $5,000 or 5 years imprisonment or both. However, this act does not apply to the Governor of the Farm Credit Administration when engaged in the performance of his duties.

41/ 7 U.S.C. 51 et seq. (1940).
42/ 7 U.S.C. §471 et seq. (1940).
43/ Cited supra note 10.
44/ 12 U.S.C. §1141j(d) (1940). See also Agricultural Appropriation Act, 1945, cited supra note 10, item entitled "Office of the Secretary, Salaries and Expenses", providing that no part of the funds appropriated by it shall be used for the payment of any officer or employee of the Department who issues any prediction, except as to damage threatened or caused by insects and pests, with respect to future prices of cotton.

XI. Research and Experimental Work.

1. The "Hatch Act" of March 2, 1887,[45] the "Adams Act" of March 16, 1906,[46] and the "Purnell Act" of February 24, 1925,[47] and acts supplementary thereto,[48] provide for grants to States for experimental work in agriculture. This, of course, includes experimental work relating to cotton.

2. The Act of April 12, 1928,[49] authorizes technical and scientific research in American-grown cotton and its by-products and their present and potential uses, including new and additional commercial and scientific uses for cotton and its by-products.

3. The Act of April 19, 1930,[50] authorizes the Secretary of Agriculture to investigate the ginning of cotton.

4. Title I of the "Bankhead-Jones Research Act of June 29, 1935,"[51] provides for research into laws and principles underlying basic problems for agricul ture in its broadest aspects, new and improved methods of distribution, and new and extended uses for agricultural commodities including cotton and by-products by the Secretary of Agriculture and the State Experiment Stations.

5. Section 202 of the Agricultural Adjustment Act of 1938,[52] provides for the establishment of four regional research laboratories for research into new uses of farm commodities, including cotton, and products and by-products thereof, particularly those in which there are surpluses.

XII. Control of Pests.

1. The "Insect Pest Act,"[53] prohibits the transportation, removal, or mailing interstate, or from a foreign country into the United States, in a live state, of the boll weevil or any other insect which is notoriously injurious to cultivated crops, or the eggs, pupae, or larvae of such insects.

45/ 7 U.S.C. §362,363,365,368-368c, 372, 377-379 (1940).
46/ 7 U.S.C. §369 (1940).
47/ 7 U.S.C. §§361, 366, 370, 371, 373-376, 380, 382 (1940).
48/ 7 U.S.C. §§386-386f (1940).
49/ 7 U.S.C. §423 (1940).
50/ 7 U.S.C. §424 (1940).
51/ 7 U.S.C. §§427-427g (1940).
52/ 7 U.S.C. §1292 (1940).
53/ 7 U.S.C. §141 (1940).

2. The "Plant Quarantine Act",[54] regulates the importation of plants, fruits, vegetables, roots, bulbs, seeds, and other plant products (which, of course, includes cotton), if the Secretary of Agriculture determines that such importation may result in the introduction of injurious insect pests, and directs the Secretary of Agriculture to quarantine any State, territory, or the District of Columbia, or any portion thereof, when he determines that would be necessary in order to prevent the spread of insect infestation.

3. "The Terminal Inspection Act",[55] permits the inspection, by State officials at destination, of plants and plant products transported by mail which, in the opinion of such officials, may result in the introduction into the State of plant pests; and prohibits mailing of any package containing plants or plant products to any State having such inspection, without marking the package so that its contents may be readily ascertained.

4. "The Mexican Pink Bollworm Act",[56] authorizes the Secretary of Agriculture to make surveys to ascertain the actual distribution of the pink bollworm in Mexico, to establish, in cooperation with the States concerned, zones free from cotton culture on or near the border of any State or States adjacent to Mexico, and to cooperate with Mexico in exterminating local infestation near the border of the United States.

5. "The Mexican Border Act",[57] authorizes the Secretary of Agriculture to adopt regulations governing the entry from Mexico into the United States of railway cars and other vehicles, freight, express, baggage, and other materials which may carry insect pests and plant diseases, and to provide for the inspection, cleaning and disinfection of such vehicles and materials.

6. The Department of Agriculture Organic Act of 1944,[58] authorizes the Secretary of Agriculture, independently or in cooperation with States, associations, and individuals, to carry out measures to eradicate and control the pink bollworm, among other things; to cooperate with Mexico in carrying out surveys and control operations in Mexico in the eradication of pink bollworm; and to promulgate regulations providing for inspection of domestic plants and plant products offered for export and to certify to their freedom from insect pests and plant diseases.

54/ 7 U.S.C. §151 (1940).
55/ 7 U.S.C. §166 (1940).
56/ 7 U.S.C. §145 (1940).
57/ 7 U.S.C. §149 (Supp. III).
58/ Pub. L. No. 425, 78th Cong., 2d Sess. (Sept. 21, 1944) Section 102.